Anaconda

Anaconda, Inc.

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GETTING STARTED

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Whether you want to build data science/machine learning models, deploy your work to production, or securely manage a team of engineers, Anaconda provides the tools necessary to succeed. This documentation is designed to aid in building your understanding of Anaconda software and assist with any operations you may need to perform to manage your organization's users and resources.

CHAPTER

ONE

POPULAR PAGES

What's New? Sign up for the Anaconda newsletter for industry news and feature updates

https://www.anaconda.com/newsletter Getting Started Familiarize yourself with Anaconda's tools and offerings

Getting started with Anaconda Installing Anaconda The Anaconda Distribution for Windows, Mac, and more

Installing Anaconda Distribution Installing Navigator Your handy desktop portal for Data Science and Machine Learning

Installing Navigator

CHAPTER

TWO

CAPABILITIES

The following table lists the capabilities available for each tier of Anaconda. Depending on your set of problems, one bundle of capabilities may be better suited to your needs.

Note: Use of Anaconda's offerings at an organization of 200 or more employees or contractors requires a Business or Enterprise license. Further, a Business or Enterprise license is always required for any individual or entity that is embedding, mirroring, or providing third parties access to our products. For more information, see our Terms of Service.

Capabilities	Free	Starter	Pro*	Business	Enterprise
Distribution & Packages	Yes	Yes	Yes	Yes	Yes
Navigator	Yes	Yes	Yes	Yes	Yes
Anaconda AI Navigator	Yes	Yes	Yes	Yes	Yes
Anaconda Toolbox in Excel	Yes	Yes	Yes	Yes	Yes
Anaconda Code (beta)	Yes	Yes	Yes	Yes	Yes
Anaconda Community	Yes	Yes	Yes	Yes	Yes
Cloud Notebooks	5GB	10GB	20GB	20GB	Unlimited
Anaconda Assistant	30 daily chats	60	120	120	Unlimited
Anaconda Learning	Limited	Yes	Yes	Yes	Yes
Curated Repository	—	—	Yes	Yes	Yes
Signature Verification	—	—	Yes	Yes	Yes
CVE Visibility	—	—	—	Yes	Yes
Policy Filters	—	—	—	Yes	Yes
Virtual Channels	—	—	—	Yes	Yes
Site License	—	—	—	Yes	Custom
On-prem/Air-gap	—	—	—	Add-on	Add-on
Collaboration	—	—	—	—	Yes
Deployment	—	—	—	—	Yes

Note: * Pro is a legacy tier no longer available for purchase.

2.1 Distribution & Packages

The *Anaconda Distribution* installer provides users with conda–the environment and package manager–and the Anaconda Distribution, a Python data science distribution of over 300 popular data science and machine learning packages.

The *Miniconda* installer is a lightweight version of the Anaconda Distribution installer that only provides conda, its dependencies, and a few other select packages.

Anaconda's public package repository, repo.anaconda.com, provides 8,000+ open-source data science and machine learning packages. Users can install and update these packages on all major operating systems and architectures using conda.

2.2 Navigator

Anaconda Navigator is a desktop graphical user interface (GUI) included in Anaconda Distribution that allows you to launch applications and manage conda packages, environments, and channels without using command line interface (CLI) commands. Navigator can search for packages on Anaconda.org or in a local Anaconda Repository. It is available for Windows, macOS, and Linux.

2.3 Anaconda AI Navigator

Anaconda AI Navigator is a desktop application from Anaconda that enables you to browse, download, and run Generative AI Models directly on your device. It features a user-friendly interface to guide you through our catalog of LLMs with various parameter counts, sizes, and capabilities so you can find the right model for your specific device—all in a secure and private desktop environment. This tool allows you to experiment with and leverage these models to meet your specific use cases and organizational requirements.

2.4 Anaconda Toolbox in Excel

Anaconda Toolbox is an Excel add-in that makes Python accessible from your spreadsheets, even if you're not an expert. Quickly generate, save, and share code across Excel and Notebooks, create visualizations, and get help from our Anaconda Assistant, learning Python as you go.

2.5 Anaconda Code

Anaconda Code empowers you to write Python code and run it locally, directly within Excel. This gives you flexibility and control over the Python environment in your workbook, allowing you to add and remove packages as needed, all while keeping code and data securely within your workbook.

2.6 Anaconda Community

Engage with others in the Anaconda Community Forum and learn the basics and beyond with instructor-guided walk-throughs and lessons from Anaconda Learning.

2.7 Cloud Notebooks

Anaconda Notebooks allows anyone, anywhere to begin their data science journey. Spin up awesome data science projects directly from your browser with all the packages and computing power you need.

2.8 Anaconda Assistant

Write and debug code, analyze data, and visualize results with Anaconda Assistant, available in *cloud notebooks* and *local notebooks*.

2.9 Anaconda Learning

Master the foundations of data science through a full library of structured, on-demand courses. Code along with your course instructors, develop projects, and save your progress directly inside Anaconda Learning.

2.10 Curated Repository

Access Anaconda's curated premium repository, designed to support your business or enterprise with tokenized access and a guaranteed uptime Service Level Agreement (SLA).

2.11 Signature Verification

Signature verification certifies the integrity and authenticity of packages downloaded from the Anaconda Repository.

2.12 CVE Visibility

View CVE (Common Vulnerabilities and Exposures) data associated with your channels' packages. Anaconda regularly pulls its CVE databases from the National Vulnerability Database (NVD) and the US National Institute of Standards and Technology (NIST) to minimize the risk of vulnerable software in our applications and web pages. Anaconda has an extensive and well-established process for curating CVEs, assessing whether or not packages that Anaconda built are affected by any CVEs, determining which versions in our repository are affected, and mitigating the vulnerability.

- *CVE documentation for Package Security Manager (Cloud)*
- CVE documentation for Package Security Manager (On-prem) and Workbench

2.13 Policy Filters

Apply policy filters to a channel to restrict the available packages that channel can source. You can filter packages by license, Common Vulnerabilities and Exposures (CVE) score, CVE status, package age, and by using the conda spec.

- *Policy filter documentation for Package Security Manager (Cloud)*
- Mirroring filter documentation for Package Security Manager (On-prem) and Workbench

2.14 Virtual Channels

Customize virtual copies of Anaconda-curated and -maintained repositories for your organization with policy filters, allowing for multiple variances of a repository's package set.

- *Channel documentation for Package Security Manager (Cloud)*
- Channel documentation for Package Security Manager (On-prem)
- Channel documentation for Workbench

2.15 Site License

Large organizations with thousands of members can purchase a site license to provide access to all users in the organization with a single license. For more information, see site license.

2.16 On-prem/Air-gap

Enable governance and security compliance for your users in a dedicated, on-premise artifact repository that can be installed on your infrastructure, in your private cloud, or made available through a managed service implementation.

- Air-gapped environment preparation for Package Security Manager (On-prem).
- Preparing a BYOK8s environment for Workbench

2.17 Collaboration

Share your projects with authorized users for increased collaboration on enterprise-level efforts. Connect to an external version control repository and fine-tune user access on the individual project and repository level.

2.18 Deployment

Publish your interactive data visualizations, live notebooks, and machine learning models in a self-contained deployment with all the necessary dependencies. View activity and system logs to gain insights into your user services and troubleshoot issues.

2.18.1 Getting started with Anaconda

Welcome to Anaconda! This topic can help you decide which Anaconda installer to download and whether to use conda (CLI) or Anaconda Navigator (GUI) for managing environments and packages. You'll also find several resources to build your understanding of Anaconda's most popular offerings.

Should I use Anaconda Distribution or Miniconda?

Both the Anaconda Distribution and Miniconda installers include the conda package and environment manager, but how you plan to use the software will determine which installer you want to choose.

Install Anaconda Distribution

Install Miniconda

	Anaconda Distribution	Miniconda
Created and published by Anaconda	Yes	Yes
Has conda	Yes	Yes
Has *Anaconda Navigator*	Yes	No
# of packages	300+	< 70
Install space required	~4.4 GB	~480 MB

What's your experience level?

I'm just starting out and don't know what packages I should use.
Install Anaconda Distribution! It includes over *300 standard data science and machine learning packages*, which will give you a kickstart in your development journey.

I don't have much experience with the command line.
Install Anaconda Distribution! The install includes Anaconda Navigator, a desktop application that is built on top of conda. You can use Navigator's graphical user interface (GUI) to create environments, install packages, and launch development applications like Jupyter Notebooks and Spyder. For more information on Navigator, see *Getting started with Navigator*.

I know exactly what packages I want to use and I don't want a large download.
Install Miniconda! Miniconda is a minimal installer that only includes a very small installation of Anaconda's distribution—conda, Python, and a few other packages. For more information, see the *Miniconda documentation*.

I only use the command line.
Install Miniconda *or* Anaconda Distribution! Both installations include conda, the command line package and environment manager. For more information on conda, see the conda Getting Started page or download the conda cheatsheet.

Should I use Anaconda Navigator or conda?

Anaconda Navigator is a desktop application that is included with every installation of Anaconda Distribution. It is built on top of conda, the open-source package and environment manager, and allows you to manage your packages and environments from a graphical user interface (GUI). This is especially helpful when you're not comfortable with the command line.

Note: Anaconda Navigator is not included with Miniconda. Use the command `conda install anaconda-navigator` to manually install Navigator onto your computer.

A command line interface (or CLI) is a program on your computer that processes text commands to do various tasks. Conda is a CLI program, which means it can only be used via the command line. On Windows computers, Anaconda recommends that you use the Anaconda Prompt CLI to work with conda. On macOS and Linux, users can use their built-in command line applications.

Navigator resources

- *Getting started with Navigator (10 minutes)*
- *Navigator user guide*

Conda resources

- Getting started with conda (20 minutes)
- Conda cheatsheet
- Conda user guide

Free Anaconda Learning course

In the **Get Started with Anaconda** entry-level course, you'll learn about packages, conda environments, Jupyter Notebooks, and more. We'll also guide you through initiating a Python program (in both a notebook and several popular IDEs) and show you what happens when a bug is identified in Python code.

Get Started with Anaconda

Anaconda Notebooks

Anaconda Notebooks allow anyone, anywhere to begin their data science journey. Spin up awesome data science projects directly from your browser with all the packages and computing power you need.

Launch Anaconda Notebooks

IDE tutorials

The following tutorials show you the basics of using some popular IDEs (integrated development environments) with Anaconda:

- JupyterLab
- *PyCharm*
- *Visual Studio Code (VS Code)*
- *Spyder*

Deprecated tutorials

The following tutorials have been deprecated and may be out of date:

- ../../working-with-conda/ide-tutorials/eclipse-pydev
- ../../working-with-conda/ide-tutorials/idle
- ../../working-with-conda/ide-tutorials/intellij
- ../../working-with-conda/ide-tutorials/ninja
- ../../working-with-conda/ide-tutorials/python-ptvs
- ../../working-with-conda/ide-tutorials/sublime
- ../../working-with-conda/ide-tutorials/wing

2.18.2 Anaconda Distribution

The Most Trusted Distribution for Data Science

Anaconda® Distribution is a Python/R data science distribution that contains:

- conda - a package and environment manager for your command line interface
- *Anaconda Navigator* - a desktop application built on conda, with options to launch other development applications from your managed environments
- *Over 300 automatically-installed packages* that work well together out of the box
- Access to the Anaconda Public Repository, with 8000 open-source data science and machine learning packages

Is Anaconda Distribution free for me?

> For details on Anaconda Distribution and Anaconda's Terms of Service, see our Terms of Service FAQ and our official Terms of Service.

Getting started

Installation Install Anaconda Distribution

Installing Anaconda Distribution Working with conda

> View documentation applicable to both Anaconda or Miniconda

Working with conda

Reference

System requirements Check the system requirements for an Anaconda Distribution install

System requirements Release notes View an archived list of releases (with included packages) of Anaconda Distribution

Anaconda Distribution release notes Hashes Check the integrity of your installer with sha256 hashes on repo.anaconda.com

https://repo.anaconda.com/archive/ Troubleshooting Troubleshoot issues with Anaconda or Miniconda

Troubleshooting Follow along with step-by-step videos to download and install Anaconda, learn the basics, and gain hands-on experience from the Anaconda Learning team here:

Anaconda Learning

System requirements

As of 2024-10-21

- License: Free for individuals and small organizations (<200 employees). A paid license is required for larger organizations and anyone embedding or mirroring Anaconda. See the TOS for details.
- Operating system: Windows 10 or later, 64-bit macOS 10.15+ (for Intel) or 64-bit macOS 11.1+ (for Apple Silicon), or Linux, including Ubuntu, RedHat, CentOS 7+, and others.
- If your operating system is older than what is currently supported, you can find older versions of the Anaconda installers in our archive that might work for you. See *Using Anaconda on older operating systems* for version recommendations.
- System architecture: Windows - 64-bit x86; macOS - 64-bit x86 or Apple Silicon (ARM64); Linux - 64-bit x86, 64-bit aarch64 (AWS Graviton2), or s390x (Linux on IBM Z & LinuxONE).
- The `linux-aarch64` Miniconda installer requires `glibc >=2.26` and thus will **not** work with CentOS 7, Ubuntu 16.04, or Debian 9 ("stretch").
- The `linux-aarch64` package builds might not be compatible with certain Raspberry Pi setups, as Anaconda uses compiler options that target the server-class Neoverse N1/N2 microarchitecture.
- Minimum 5 GB disk space to download and install.

Note: It is best practice to install Anaconda Distribution for the local user, which does not require administrator permissions and is the most robust type of installation. However, if you have administrator permissions, you can install Anaconda Distribution system-wide.

Installing Anaconda Distribution

Using Anaconda in a commercial setting?

You might need to purchase a license to stay compliant with our Terms of Service.

This page provides instructions for installing Anaconda Distribution on Windows, macOS, and Linux.

Note: If you prefer an installation without the extensive collection of packages included in Anaconda Distribution, *install Miniconda* instead.

Miniconda is a free, miniature installation of Anaconda Distribution that includes only conda, Python, the packages they both depend on, and a small number of other useful packages.

Basic install instructions

Note: If you've installed multiple versions of Anaconda Distribution, the system defaults to using the most current version, as long as you haven't altered the default install path.

Windows installation

Tip: More of a visual learner? and watch the Installing Anaconda (Windows) video in our Get Started with Anaconda course. This video guides you through installation in a quick two minutes.

1. Download the installer from the Anaconda website or by using your preferred command line interface:

Anaconda website

Command Prompt

Open a Command Prompt window and run the following command:

```
curl https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Windows-x86_64.
↪exe --output .\Downloads\Anaconda3-2024.10-1-Windows-x86_64.exe
```

To download a different version

View a full list of Anaconda Distribution installers in the official archive.

To download a different version of Anaconda Distribution, copy the **Filename** of an installer from the archive, then download it using a `curl` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
curl https://repo.anaconda.com/archive/<FILENAME> --output
↪<FILENAME>
```

Caution: Ensure that you are downloading an installer that is compatible with your operating system!

PowerShell

Open a PowerShell window and run the following command:

```
wget "https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Windows-x86_64.
↪exe" -outfile ".\Downloads\Anaconda3-2024.10-1-Windows-x86_64.exe"
```

To download a different version

View a full list of Anaconda Distribution installers in the official archive.

To download a different version of Anaconda Distribution, copy the **Filename** of an installer from the archive, then download it using a `wget` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
wget "https://repo.anaconda.com/archive/<FILENAME>"" -outfile ".\
↪Downloads\<FILENAME>"
```

> **Caution:** Ensure that you are downloading an installer that is compatible with your operating system!

2. (Recommended) Verify the integrity of your installer to ensure that it was not corrupted or tampered with during download.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open PowerShell and run the following command:

   ```
   # Replace <INSTALLER_FILE> with the name of the downloaded␣
   ↪installer file
   Get-FileHash .\Downloads\<INSTALLER_FILE> -Algorithm SHA256
   ```

   For example:

   ```
   Get-FileHash .\Downloads\Anaconda3-2024.10-1-Windows-x86_64.exe␣
   ↪-Algorithm SHA256
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/archive to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Go to your Downloads folder (or Home folder if downloaded via CLI) and double-click the installer to launch.

> **Caution:** To prevent permission errors, do not launch the installer from the *Favorites folder*.

Note: If you encounter issues during installation, temporarily disable your anti-virus software during install, then re-enable it after the installation concludes. If you installed for **All Users**, *uninstall* Anaconda and re-install it for **Just Me** only.

---

4. Click **Next** and then agree to Anaconda's Terms of Service (TOS).
5. Select an installation option:
   - Just Me (Recommended) - Install Anaconda Distribution for the current user account.
   - All Users - Install Anaconda Distribution for all user accounts on the computer (requires Windows Administrator privileges).
6. Click **Next**.
7. Select a destination folder to install Anaconda, then click **Next**.

> **Caution:**
>
> - The installation directory path cannot contain spaces or Unicode characters. For more information, see the *FAQ*.
> - Do not install as Administrator unless admin privileges are required.

8. Customize your installation options:
   - Create shortcuts - Selected by default. Creates Start Menu shortcuts for the Anaconda Navigator, Spyder, Jupyter Notebook, and Anaconda Prompt packages. Deselecting this option skips creating these shortcuts.
   - Add Anaconda3 to my PATH environment variable - Adds the path that contains the conda binaries to your PATH environment variable.

     Anaconda **does not** recommend selecting this option. The conda binaries path contains other package binaries, which are permanently added to your PATH environment variable, even if no conda environment is currently active. This makes it possible for other software to use these package files, which might lead to errors.

     Note: Unless you plan on installing and running multiple versions of Anaconda Distribution or Python, open Anaconda Navigator or the Anaconda Prompt from the Start Menu to begin your environment management work.

     > **Caution:** As of `Anaconda Distribution 2022.05`, the option to add Anaconda to the PATH environment variable during an **All Users** installation has been disabled. This was done to address a security exploit. You can still add Anaconda to the PATH environment variable during a **Just Me** installation.

   - Register Anaconda3 as my default Python 3.12 - Selected by default. Registers the Python package in this install as the default Python for programs like VSCode, PyCharm, etc.

- Clear the package cache upon completion - Runs `conda clean --all --force-pkgs-dirs` after the install finishes. For more information on these commands, see the conda command documentation.

9. Click **Install**. The installation might take a few minutes to complete. Click **Show details** to view the packages being installed.
10. Click **Next** twice, then click **Finish** to close the installer.

Tip: If you are behind a company proxy, you might need to do some additional setup. For more information, see *Using Anaconda behind a company proxy*.

---

macOS/Linux installation

macOS Graphical installer

Tip: More of a visual learner? and watch the Installing Anaconda (Mac) video in our Get Started with Anaconda course. This video guides you through using the graphical installer in a quick two minutes.

Caution: The graphical installer for macOS installs Anaconda into `/opt/anaconda3` in your file system. If you want to install Anaconda into your Home directory or if you have multiple users on a system and want to manage your installation more carefully, Anaconda recommends following the instructions in the macOS Command Line installer tab.

1.
2. (Recommended) Verify the integrity of your installer to ensure that it was not corrupted or tampered with during download.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

```
# Replace <INSTALLER-FILE> with the name of the downloaded␣
↪installer file
shasum -a 256 ~/Downloads/<INSTALLER-FILE>
```

   For example:

   ```
   shasum -a 256 ~/Downloads/Anaconda3-2024.10-1-MacOSX-x86_64.pkg
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/archive to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

3. Double-click the downloaded file and click **Continue** to start the installation.
4. View the Read Me instructions and click **Continue**.
5. Read through Anaconda's Terms of Service (TOS) and click **Continue**, then click **Agree** to agree to the terms.

Caution: For installer versions 2023.09 or older, the installer might skip the Destination Select page during installation, which will cause the installation to fail. If the installer skips this page, click **Change Install Location…** on the Installation Type page to get to this step.

6. Choose an install location:
   - Install for all users of this computer (Recommended) - Installs Anaconda Distribution into `/opt/anaconda3` for all users of the computer.
   - Install on a specific disk - Enables you to choose a different location to install Anaconda Distribution.

Caution: If you get the error message "You cannot install Anaconda in this location," reselect **Install for all users of this computer** and try again.

7. Click **Install**. The installation may take a few minutes to complete.

Note: If you get the error message "This package is incompatible with this version of macOS," please see *here* for troubleshooting help.

8. Click **Continue**.
9. Click **Close** to exit the installer.

macOS Command Line installer

1. Download the installer by opening a terminal and running one of the following commands (depending on your macOS architecture):

Apple Silicon

```
curl -O https://repo.anaconda.com/archive/Anaconda3-2024.10-1-MacOSX-arm64.
↪sh
```

Intel

```
curl -O https://repo.anaconda.com/archive/Anaconda3-2024.10-1-MacOSX-x86_64.
↪sh
```

To download a different version

View a full list of Anaconda Distribution installers in the official archive.

To download a different version of Anaconda Distribution, copy the **Filename** of an installer from the archive, then download it using a `curl` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
curl https://repo.anaconda.com/archive/<FILENAME> --output
↪<FILENAME>
```

> **Caution:** Ensure that you are downloading an installer that is compatible with your operating system!

2. (Recommended) Verify the integrity of your installer to ensure that it was not corrupted or tampered with during download.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

   ```
   # Replace <INSTALLER-FILENAME> with the name of the␣
   ↪downloaded installer file
   shasum -a 256 ~/<INSTALLER-FILENAME>
   ```

   For example:

   ```
   shasum -a 256 ~/Anaconda3-2024.10-1-MacOSX-arm64.sh
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/archive to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Install by running the following (depending on your macOS architecture):

Apple Silicon

```
bash ~/Anaconda3-2024.10-1-MacOSX-arm64.sh
```

Intel

```
bash ~/Anaconda3-2024.10-1-MacOSX-x86_64.sh
```

4. Press Return to review Anaconda's Terms of Service (TOS). Then press and hold Return to scroll.
5. Enter `yes` to agree to the TOS.
6. Press Return to accept the default install location (`PREFIX=/Users/<USER>/anaconda3`), or enter another file path to specify an alternate installation directory. The installation might take a few minutes to complete.
7. Choose an initialization options:
   - Yes - `conda` modifies your shell configuration to initialize conda whenever you open a new shell and to recognize conda commands automatically.
   - No - `conda` will not modify your shell scripts. After installation, if you want to initialize, you must do so manually. For more information, see *Manual shell initialization*.
8. The installer finishes and displays, "Thank you for installing Anaconda3!"
9. Close and re-open your terminal window for the installation to fully take effect, or use the following command to refresh the terminal:

```
source ~/.zshrc
```

Manual shell initialization

Once installation has successfully completed, initialize your shell by running the following command:

```
# Replace <PATH_TO_CONDA> with the path to your conda install
source <PATH_TO_CONDA>/bin/activate
conda init --all
```

If you want to specify the shell to initialize, see conda init in the official conda documentation for a list of supported shells.

Note: macOS 10.15 and later use `zsh` as the default shell. Once installation process has completed, initialize conda in a `zsh` shell by running the following commands:

```
source <PATH_TO_CONDA>/bin/activate
conda init zsh
```

Note: You can also control whether or not your shell has the base environment activated each time it opens. The following commands only work if conda has been initialized first:

Activated by default

```
conda config --set auto_activate_base True
```

Not activated by default

```
conda config --set auto_activate_base False
```

Linux installer

1. Download the latest version of Anaconda Distribution by opening a terminal and running one of the following commands (depending on your Linux architecture):

Linux x86

```
wget https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Linux-x86_64.sh
```

AWS Graviton2/ARM64

```
wget https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Linux-aarch64.sh
```

- The `linux-aarch64` package builds might not be compatible with certain Raspberry Pi setups, as Anaconda uses compiler options that target the server-class Neoverse N1/N2 microarchitecture.

IBMZ/LinuxOne/s390x

```
wget https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Linux-s390x.sh
```

To download a different version

View a full list of Anaconda Distribution installers in the official archive.

To download a different version of Anaconda Distribution, copy the **Filename** of an installer from the archive, then download it using a `wget` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
wget https://repo.anaconda.com/archive/<FILENAME>
```

> **Caution:** Ensure that you are downloading an installer that is compatible with your operating system!

2. (Recommended) Verify the integrity of your installer to ensure that it was not corrupted or tampered with during download.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

   ```
   # Replace <INSTALLER-FILENAME> with the name of the␣
   ↪downloaded installer file
   shasum -a 256 ~/<INSTALLER-FILENAME>
   ```

   For example:

   ```
   shasum -a 256 ~/Anaconda3-2024.10-1-Linux-x86_64.sh
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/archive to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Install Anaconda Distribution by running one of the following commands (depending on your Linux architecture):

Linux x86

```
bash ~/Anaconda3-2024.10-1-Linux-x86_64.sh
```

AWS Graviton2/ARM64

```
bash ~/Anaconda3-2024.10-1-Linux-aarch64.sh
```

IBMZ/LinuxOne/s390x

```
bash ~/Anaconda3-2024.10-1-Linux-s390x.sh
```

4. Press Return to review Anaconda's Terms of Service (TOS). Then press and hold Return to scroll.
5. Enter `yes` to agree to the TOS.
6. Press Return to accept the default install location (`PREFIX=/Users/<USER>/anaconda3`), or enter another file path to specify an alternate installation directory. The installation might take a few minutes to complete.
7. Choose an initialization options:
   - Yes - `conda` modifies your shell configuration to initialize conda whenever you open a new shell and to recognize conda commands automatically.
   - No - `conda` will not modify your shell scripts. After installation, if you want to initialize, you must do so manually. For more information, see *Manual shell initialization*.
8. The installer finishes and displays, "Thank you for installing Anaconda3!"

9. Close and re-open your terminal window for the installation to fully take effect, or use the following command to refresh the terminal, depending on your shell:

Bash

```
source ~/.bashrc
```

Zsh

```
source ~/.zshrc
```

Fish

```
exec fish
```

Manual shell initialization

Once installation has successfully completed, initialize your shell by running the following command:

```
# Replace <PATH_TO_CONDA> with the path to your conda install
source <PATH_TO_CONDA>/bin/activate
conda init --all
```

If you want to specify the shell to initialize, see conda init in the official conda documentation for a list of supported shells.

Navigator dependencies

Anaconda Navigator is included with Anaconda Distribution by default. However, the following extended dependencies might be required for certain versions of Anaconda Distribution in order to use Anaconda Navigator (and other GUI packages) with Linux:

Debian

```
apt-get install libgl1-mesa-glx libegl1-mesa libxrandr2 libxrandr2 libxss1␣
↪libxcursor1 libxcomposite1 libasound2 libxi6 libxtst6
```

RedHat

```
yum install libXcomposite libXcursor libXi libXtst libXrandr alsa-lib mesa-
↪libEGL libXdamage mesa-libGL libXScrnSaver
```

ArchLinux

```
pacman -Sy libxau libxi libxss libxtst libxcursor libxcomposite libxdamage␣
↪libxfixes libxrandr libxrender mesa-libgl alsa-lib libglvnd
```

OpenSuse/SLES

```
zypper install libXcomposite1 libXi6 libXext6 libXau6 libX11-6 libXrandr2␣
↪libXrender1 libXss1 libXtst6 libXdamage1 libXcursor1 libxcb1 libasound2␣
↪libX11-xcb1 Mesa-libGL1 Mesa-libEGL1
```

Gentoo

```
emerge x11-libs/libXau x11-libs/libxcb x11-libs/libX11 x11-libs/libXext x11-
↪libs/libXfixes x11-libs/libXrender x11-libs/libXi x11-libs/libXcomposite x11-
↪libs/libXrandr x11-libs/libXcursor x11-libs/libXdamage x11-libs/
↪libXScrnSaver x11-libs/libXtst media-libs/alsa-lib media-libs/mesa
```

Note: You can also control whether or not your shell has the base environment activated each time it opens. The following commands only work if conda has been initialized first:

Activated by default

```
conda config --set auto_activate_base True
```

Not activated by default

```
conda config --set auto_activate_base False
```

Verify your install

Anaconda Navigator, the Graphical User Interface (GUI) for conda, should automatically open after successful installation of Anaconda Distribution.

If it does not, verify your installation by opening the application manually, or by using the CLI:

Opening Navigator manually

Windows

1. Search for "Anaconda Navigator" in the taskbar search.
2. Select **Anaconda Navigator**.

macOS

1. Click **Launchpad**.
2. Select **Anaconda Navigator**.

You can also use Cmd+Spacebar to open Spotlight Search and search for Navigator.

Linux

1. In most Linux distributions, use Ctrl+Alt+T to open a terminal application.
2. Open Navigator by running the following command:

```
anaconda-navigator
```

If Navigator does not open, review our *help resources*.

Using conda to verify manually

1. Access the CLI for your operating system:

Windows

1. Search for "Anaconda Prompt" in the taskbar search.
2. Select **Anaconda Prompt**.

macOS

1. Use Cmd+Spacebar to open Spotlight Search.
2. Type "Terminal" and press Return to open.

Linux

In most Linux distributions, use Ctrl+Alt+T to open a terminal application.

You should see `(base)` in the command line prompt. This tells you that you're in your base conda environment. To learn more about environments, see *Environments*.

2. Run any conda command. For example:
   - `conda list` - Displays a list of packages installed in your active environment and their versions.
   - `anaconda-navigator` - Opens Anaconda Navigator.

Advanced install options

For more advanced installation instructions, such as installing with silent mode, installing on older operating systems, or multi-user installs, see *Advanced installation*.

Other ways to get Anaconda or Miniconda

For instructions on using Anaconda Docker images or the Anaconda Cloudera Distributed Hadoop cluster, see *Applications/Integrations*.

Problems?

- *Troubleshooting guide* for general troubleshooting
- *Help and support* for resources such as community support and bug reports

What's next?

Get started programming with Anaconda in the *Getting started with Anaconda* guide.

Visit Anaconda Cloud to start programming for FREE in a notebook. Learn how from Anaconda Learning, too!

Advanced installation

See the following topics for advanced installation options. For basic installation instructions, see *Installing Anaconda Distribution*.

Installing with silent mode

When installing in silent mode, you can supply additional arguments to the install command through your command line interface (CLI) or via script. Silent mode installation can be useful when deploying Anaconda Distribution to many clients, as the installation can be completed automatically without the user needing to manually select options in an installer wizard GUI or within the CLI itself.

> **Caution:** Installing silently automatically accepts Anaconda's Terms of Service (TOS). Make sure you review Anaconda's TOS before installing silently.

Windows

Download Anaconda Distribution manually from one of the links above or use `curl -O` to download via your CLI.

```
curl -O https://repo.anaconda.com/archive/Anaconda3-2024.10-1-Windows-x86_64.exe
```

To run the Windows installer for Anaconda in silent mode, use the `/S` argument. The following optional arguments are supported:

- `/InstallationType=[JustMe|AllUsers]`—Default is `JustMe`.
- `/AddToPath=[0|1]`—Default is `0`.

- /RegisterPython=[0|1]—Make this the system's default Python. Default is 0.
- /S—Install in silent mode.
- /D=<installation path>—Destination installation path. Must be the last argument. Do not wrap in quotation marks. Required if installing in silent mode.

All arguments are case-sensitive.

For example, the following batch file command installs Anaconda Distribution for the current user without registering Python as the system's default:

```
start /wait "" Anaconda3-2024.10-1-Windows-x86_64.exe /InstallationType=JustMe /
↪RegisterPython=0 /S /D=%UserProfile%Anaconda3
```

Note: As of Anaconda Distribution 2022.05, the option to add Anaconda to the PATH environment variable during an **All Users** installation has been disabled. This was done to address a security exploit. You can still add Anaconda to the PATH environment variable during a **Just Me** installation.

---

macOS/Linux

Download Anaconda Distribution manually from one of the links above or use curl -o to download via your CLI.

To run the silent installation of Miniconda for macOS or Linux, specify the -b and -p arguments of the bash installer. The following arguments are supported:

- -b—Batch mode with no PATH modifications to ~/.bashrc. Assumes that you agree to the license agreement. Does not edit the .bashrc or .bash_profile files.
- -p—Installation prefix/path.
- -f—Force installation even if the installation prefix/path already exists.

For example, the following batch file command installs Anaconda Distribution for the current user without registering Python as the system's default:

```
bash ~/Anaconda3-2024.10-1-MacOSX-x86_64.sh -b -p $HOME/anaconda3
```

The installer will not prompt you for anything, including setup of your shell to activate conda. To add this activation in your current shell session:

```
source ~/anaconda3/bin/activate
```

With this activated shell, install conda's shell functions for easier access in the future:

```
conda init --all
```

If you'd prefer that conda's base environment not be activated on startup, set the auto_activate_base parameter to false:

```
conda config --set auto_activate_base false
```

Using older versions of Anaconda Distribution

Anaconda recommends upgrading your operating system to the latest available or to one that is commonly used and supported. Upgrading your OS allows you to get the latest packages, performance improvements, bug fixes, and more.

Anaconda Distribution is currently available for:

Architecture	File name ending
Windows 64-bit	x86_64.exe
macOS Intel	x86_64.pkg, x86_64.sh
macOS Apple Silicon	arm64.pkg, arm64.sh
Linux x86_64	x86_64.sh
Linux AWS Graviton 2/ARM 64	aarch64.sh
Linux IBM Z	s390x.sh

Installing older versions of Anaconda Distribution

Note: Older versions of Anaconda Distribution are still subject to Anaconda's Terms of Service.

Older versions of Anaconda Distribution are still available for:

Architecture	File name ending
Windows 32-bit	x86.exe
Linux 32-bit Intel or AMD	x86.sh
Linux IBM Power CPU	ppc64le.sh

These versions can be downloaded from our archive. **However, these installations are no longer supported by Anaconda and most are no longer receiving security updates.**

Caution: You might not be able to use conda to update or install packages beyond what is included in the Anaconda Distribution version you've installed. This is because Anaconda Distribution provides a static bundle of packages from the time of release, but the repository continues to be updated over time. Older package versions may be removed or replaced, and the versions present in the repository might not be compatible with your operating system. For package lists for each version of Anaconda Distribution, see the *Anaconda Distribution release notes*.

Installing the `anaconda` metapackage

The `anaconda` metapackage is a version-locked collection of packages that were included in an Anaconda Distribution installer. Version-locked packages (also called pinned packages) are tied to a specific version of their software. Conda does not update pinned packages when resolving dependencies if other packages in the environment are added or modified. Because each package in the metapackage is pinned, *any attempt to update the environment will almost certainly result in build conflicts*.

However, it is still possible to install the `anaconda` metapackage and update the environment that contains it. For more information, see *Updating a metapackage environment*.

Note: The `anaconda` metapackage was removed from Anaconda Distribution installers in February of 2023 and no longer appears in your `base` environment by default.

Installing the metapackage

If you plan to install the `anaconda` metapackage, Anaconda recommends that you create an environment specifically for that metapackage first:

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Create a new environment by running the following command:

```
# Replace <ENV> with the name of your environment
conda create --name <ENV>
```

3. (Optional) Search for metapackage versions available for install by running the following command:

```
conda search anaconda
```

4. Install the `anaconda` metapackage or specify a metapackage version by running one of the following commands:

Latest version

```
conda install anaconda
```

Specific version

```
# Replace <VERSION> with the specific version you want to install
conda install anaconda=<VERSION>
```

Updating a metapackage environment

If you have an environment containing the `anaconda` metapackage and need to update packages in that environment, you must first unpin the package versions in your environment. This is accomplished by installing the `anaconda=custom` version of the metapackage:

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Open the environment containing the metapackage you want to update:

```
# Replace <ENV> with the name of your metapackage environment
conda activate <ENV>
```

3. Install the custom version of the `anaconda` package using the following command:

```
conda install anaconda=custom
```

4. Install or update packages as desired.

For more information on managing packages, see Managing packages in the conda documentation.

Installing for multiple users

The default Anaconda installation option is "Just Me," which creates an independent installation of Anaconda that will not be shared with other users on the same system. The other option is to install for all users.

If you have administrator access, you can choose to install for "All Users." This is a good option for a multi-user system where you want to allow users to import Python libraries and run Python applications.

This option does not give write permissions by default, so the users will not be able to install packages in the base environment. It allows an administrator to protect what is in the base environment. If packages are needed in the base environment, elevate the privileges to administrator from the Command Prompt and run install commands.

Windows

1.
2. Double-click the installer to launch.
3. Click **Next** to continue.
4. Read Anaconda's Terms of Service (TOS) and click **I Agree**.
5. Select an install for **All Users** (this requires administrator privileges on the computer) and click **Next**.
6. Click **Yes** to allow the installer to make changes to your computer.
7. Select a destination folder that is accessible to the users. The default is `C:\ProgramData\Anaconda`.
8. After your install is complete, open **Computer Management**, navigate to **Local Users and Groups**. Create a new group for your Anaconda users. Add users to this new group, Anaconda-Users.
9. Navigate to your Anaconda folder and then right-click and select **Properties**. Uncheck the box for **Attributes: Read-only** and save changes. Go to **Security** and click **Edit**. From there, add Anaconda-Users and set permissions. Your group will need read and write privileges.

Linux

Note: sudo access is required.

1. Install Anaconda.
2. After installation is complete, do the following:

```
#Create a new group
sudo groupadd mygroup
# Change the group ownership to "mygroup" on the entire directory where Anaconda is␣
↪installed.
# Replace /PATH/TO/ANACONDA/INSTALL with the actual path to your installed Anaconda␣
↪file.
sudo chgrp -R mygroup /PATH/TO/ANACONDA/INSTALL
# Set read and write permission for the owner, root, and the mygroup only.
# Replace /PATH/TO/ANACONDA/INSTALL with the actual path to your installed Anaconda␣
↪file.
sudo chmod 770 -R /PATH/TO/ANACONDA/INSTALL
# Add users to a group. Replace <USERNAME> with the username of the user you are␣
```

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```
↪adding.
sudo adduser <USERNAME> mygroup
```

Users added to the "mygroup" group now have the ability to access Anaconda, install packages, and create environments.

Installing Anaconda on an air-gap machine

1. Obtain a local copy of the appropriate Anaconda installer for the non-networked machine. You can copy the Anaconda installer to the target machine using many different methods, including a portable hard drive, USB drive, or CD.
2. After copying the installer to the non-networked machine, follow the detailed installation instructions for your operating system.

Tip: Install offline copies of docs.anaconda.com, business-docs.anaconda.com, and enterprise-docs.anaconda.com by installing the conda package anaconda-docs: `conda install anaconda-docs`

After installing `anaconda-docs`, you can find the downloaded documentation in your environment's `share/doc` folder.

For example, if the environment where you installed `anaconda-docs` is called `doc-environment`, you can find the downloaded documentation in `anaconda3/envs/doc-environment/share/doc`.

Anaconda Distribution release notes

The release notes below contain changes for each Anaconda Distribution version, as well as which packages are available in each installer, organized by operating system.

An RSS feed is updated each time a new package is added to the Anaconda package repository.

Note: To request a package not listed on this page, please create an issue on the Anaconda issues GitHub page.

Anaconda 2024.10-1 (Oct 23, 2024)

Python version: 3.12.7

User-facing Changes

- Conda has been updated to v24.9.2.
- A .condarc file is written into the installation directory to set the channel to Anaconda's defaults channels.
- Windows Start Menu entries are now inside separate Anaconda directories for each Miniconda installation.
- For single-user installations, Anaconda Prompt and Anaconda PowerShell Prompt have been added to the Windows Terminal profile list and can be launched directly from the tab dropdown menu (Windows 11). Windows Terminal is available in the Microsoft Store.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
_anaconda_depends	2024.10	2024.10	2024.10	2024.10	2024.1
_libgcc_mutex	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1		
aiobotocore	2.12.3	2.12.3	2.12.3	2.12.3	2.12.3
aiohappyeyeballs	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
aiohttp	3.10.5	3.10.5	3.10.5	3.10.5	3.10.5
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
alabaster	0.7.16	0.7.16		0.7.16	0.7.16
altair	5.0.1	5.0.1		5.0.1	5.0.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1		0.5.1	0.5.1
anaconda-navigator	2.6.3	2.6.3		2.6.3	2.6.3
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anaconda_powershell_prompt					
anaconda_prompt					
annotated-types	0.6.0	0.6.0		0.6.0	0.6.0
anyio	4.2.0	4.2.0		4.2.0	4.2.0
aom	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4		1.4.4	1.4.4
applaunchservices				0.3.0	0.3.0
appnope				0.1.3	0.1.3
appscript				1.2.5	1.2.5
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0		21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0		21.2.0	21.2.0
arrow	1.2.3	1.2.3		1.2.3	1.2.3
arrow-cpp	16.1.0	16.1.0	16.1.0	16.1.0	16.1.0
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	6.1.3	6.1.3	6.1.3	6.1.3	6.1.3
astropy-iers-data	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23	0.2024
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4		2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0		1.4.0	1.4.0
attrs	23.1.0	23.1.0	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	2.0.4	2.0.4		2.0.4	2.0.4
aws-c-auth	0.6.19	0.6.19	0.6.19	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20	0.5.20	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5	0.8.5	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16	0.2.16	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15	0.2.15	0.2.15	0.2.15

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
aws-c-http	0.6.25	0.6.25	0.6.25	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10	0.13.10	0.13.10	0.13.1
aws-c-mqtt	0.7.13	0.7.13	0.7.13	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51	0.1.51	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13	0.1.13	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16	0.18.16	0.18.16	0.18.1
aws-sdk-cpp	1.10.55	1.10.55	1.10.55	1.10.55	1.10.5
babel	2.11.0	2.11.0		2.11.0	2.11.0
bcrypt	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.3	4.12.3	4.12.3	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4		0.4.4	0.4.4
black	24.8.0	24.8.0	24.8.0	24.8.0	24.8.0
blas	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2	1.6.2	1.6.2	1.6.2
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0	1.82.0	1.82.0	1.82.0
botocore	1.34.69	1.34.69	1.34.69	1.34.69	1.34.6
bottleneck	1.3.7	1.3.7	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0		2.12.0	2.12.0
ca-certificates	2024.9.24	2024.9.24	2024.9.24	2024.9.24	2024.9
cachetools	5.3.3	5.3.3		5.3.3	5.3.3
cctools				949.0.1	949.0.
cctools_osx-64					949.0.
cctools_osx-arm64				949.0.1	
certifi	2024.8.30	2024.8.30	2024.8.30	2024.8.30	2024.8
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
cfitsio	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
click	8.1.7	8.1.7	8.1.7	8.1.7	8.1.7
cloudpickle	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.1.0	3.1.0		3.1.0	3.1.0
comm	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
conda	24.9.2	24.9.2	24.9.2	24.9.2	24.9.2
conda-build	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-index	0.5.0	0.5.0	0.4.0	0.5.0	0.5.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
conda-pack	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
conda-repo-cli	1.0.114	1.0.114		1.0.114	1.0.11
conda-token	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
constantly	23.10.4	23.10.4		23.10.4	23.10.
contourpy	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0		2.6.0	2.6.0
cryptography	43.0.0	43.0.0	43.0.0	43.0.0	43.0.0
cssselect	1.2.0	1.2.0		1.2.0	1.2.0
curl	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28		2.1.28	2.1.28
cytoolz	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
dask	2024.8.2	2024.8.2	2024.8.2	2024.8.2	2024.8
dask-core	2024.8.2	2024.8.2	2024.8.2	2024.8.2	2024.8
dask-expr	1.1.13	1.1.13	1.1.13	1.1.13	1.1.13
datashader	0.16.3	0.16.3		0.16.3	0.16.3
dav1d	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18			
debugpy	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		20200713	20200
dill	0.3.8	0.3.8	0.3.8	0.3.8	0.3.8
distributed	2024.8.2	2024.8.2	2024.8.2	2024.8.2	2024.8
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
dmglib				0.9.5	0.9.5
docstring-to-markdown	0.11	0.11		0.11	0.11
docutils	0.18.1	0.18.1		0.18.1	0.18.1
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.6.3	2.6.3	2.6.3	2.6.3	2.6.3
filelock	3.13.1	3.13.1	3.13.1	3.13.1	3.13.1
flake8	7.0.0	7.0.0		7.0.0	7.0.0
flask	3.0.3	3.0.3	3.0.3	3.0.3	3.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1			
fonttools	4.51.0	4.51.0	4.51.0	4.51.0	4.51.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
fsspec	2024.6.1	2024.6.1	2024.6.1	2024.6.1	2024.6
gensim	4.3.3	4.3.3		4.3.3	4.3.3
gettext				0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7		4.0.7	4.0.7
gitpython	3.1.43	3.1.43		3.1.43	3.1.43
glib	2.78.4	2.78.4		2.78.4	2.78.4

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
glib-tools	2.78.4	2.78.4		2.78.4	2.78.4
glog	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
greenlet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
gst-plugins-base	1.14.1	1.14.1		1.14.1	1.14.1
gstreamer	1.14.1	1.14.1		1.14.1	1.14.1
h11	0.14.0	0.14.0		0.14.0	0.14.0
h5py	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
hdf5	1.12.1	1.12.1	1.12.1	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.19.1	1.19.1		1.19.1	1.19.1
httpcore	1.0.2	1.0.2		1.0.2	1.0.2
httpx	0.27.0	0.27.0		0.27.0	0.27.0
hvplot	0.11.0	0.11.0		0.11.0	0.11.0
hyperlink	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt					
icu	73.1	73.1	73.1	73.1	73.1
idna	3.7	3.7	3.7	3.7	3.7
imagecodecs	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1
imageio	2.33.1	2.33.1	2.33.1	2.33.1	2.33.1
imagesize	1.4.1	1.4.1		1.4.1	1.4.1
imbalanced-learn	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1		7.0.1	7.0.1
incremental	22.10.0	22.10.0		22.10.0	22.10.0
inflection	0.5.1	0.5.1		0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	2.0.7	2.0.7	2.0.7	2.0.7	2.0.7
intel-openmp	2023.1.0				
intervaltree	3.1.0	3.1.0		3.1.0	3.1.0
ipykernel	6.28.0	6.28.0	6.28.0	6.28.0	6.28.0
ipython	8.27.0	8.27.0	8.27.0	8.27.0	8.27.0
ipython_genutils	0.2.0	0.2.0		0.2.0	0.2.0
ipywidgets	7.8.1	7.8.1		7.8.1	7.8.1
isort	5.13.2	5.13.2	5.13.2	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.1.0	1.1.0		1.1.0	1.1.0
itsdangerous	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1		3.2.1	3.2.1
jedi	0.19.1	0.19.1	0.19.1	0.19.1	0.19.1
jeepney	0.7.1	0.7.1			
jellyfish	1.0.1	1.0.1		1.0.1	1.0.1
jinja2	3.1.4	3.1.4	3.1.4	3.1.4	3.1.4
jmespath	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
joblib	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
jpeg	9e	9e	9e	9e	9e
jq	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6		0.9.6	0.9.6
jsonpatch	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1
jsonschema	4.23.0	4.23.0	4.23.0	4.23.0	4.23.0
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1	2023.7.1	2023.7

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0		2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0	8.6.0	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2	5.7.2	5.7.2	5.7.2
jupyter_events	0.10.0	0.10.0		0.10.0	0.10.0
jupyter_server	2.14.1	2.14.1		2.14.1	2.14.1
jupyter_server_terminals	0.4.4	0.4.4		0.4.4	0.4.4
jupyterlab	4.2.5	4.2.5		4.2.5	4.2.5
jupyterlab-variableinspector	3.1.0	3.1.0		3.1.0	3.1.0
jupyterlab_pygments	0.1.2	0.1.2	0.2.2	0.1.2	0.1.2
jupyterlab_server	2.27.3	2.27.3		2.27.3	2.27.3
jupyterlab_widgets	1.0.0	1.0.0		1.0.0	1.0.0
jxrlib	1.1	1.1	1.1	1.1	1.1
keyring	24.3.1	24.3.1		24.3.1	24.3.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
lazy_loader	0.4	0.4	0.4	0.4	0.4
lcms2	2.12	2.12	2.12	2.12	2.12
ld64				530	530
ld64_osx-64					530
ld64_osx-arm64				530	
ld_impl_linux-64	2.40				
ld_impl_linux-aarch64		2.40			
ld_impl_linux-s390x			2.40		
ldid				2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0
libabseil	20240116.2	20240116.2	20240116.2	20240116.2	20240
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.7.4	3.7.4	3.7.4
libavif	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0	1.82.0	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6		14.0.6	14.0.6
libclang13	14.0.6	14.0.6		14.0.6	14.0.6
libcups	2.4.2	2.4.2			
libcurl	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1
libcxx				14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20
libev	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0		
libgfortran				5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0		
libgfortran5	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
libglib	2.78.4	2.78.4		2.78.4	2.78.4
libgomp	11.2.0	11.2.0	11.2.0		
libgrpc	1.62.2	1.62.2	1.62.2	1.62.2	1.62.2
libiconv	1.16	1.16		1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.17	12.17		12.17	12.17
libprotobuf	4.25.3	4.25.3	4.25.3	4.25.3	4.25.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3		1.9.3	1.9.3
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0	0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5		
libwebp-base	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15			
libxkbcommon	1.0.1	1.0.1			
libxml2	2.10.4	2.10.4	2.13.1	2.13.1	2.13.1
libxslt	1.1.37	1.1.37		1.1.41	1.1.41
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0		2.0.0	2.0.0
llvm-openmp				14.0.6	14.0.6
llvmlite	0.43.0	0.43.0		0.43.0	0.43.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	5.2.1	5.2.1		5.2.1	5.2.1
lz4	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10		2.10	2.10
m2-msys2-runtime					
m2-patch					
m2w64-libwinpthread-git					
markdown	3.4.1	3.4.1		3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0		2.2.0	2.2.0
markupsafe	2.1.3	2.1.3	2.1.3	2.1.3	2.1.3
matplotlib	3.9.2	3.9.2	3.9.2	3.9.2	3.9.2
matplotlib-base	3.9.2	3.9.2	3.9.2	3.9.2	3.9.2
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0		0.3.0	0.3.0
mdurl	0.1.0	0.1.0		0.1.0	0.1.0
menuinst	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
mistune	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
mkl	2023.1.0				

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
mkl-service	2.4.0				
mkl_fft	1.3.10				
mkl_random	1.2.7				
more-itertools	10.3.0	10.3.0	10.3.0	10.3.0	10.3.0
mpmath	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch					
multidict	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0		0.6.0	0.6.0
mypy	1.11.2	1.11.2	1.11.2	1.11.2	1.11.2
mypy_extensions	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24		5.7.24	5.7.24
navigator-updater	0.5.1	0.5.1		0.5.1	0.5.1
nbclient	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
nbconvert	7.16.4	7.16.4	7.10.0	7.16.4	7.16.4
nbformat	5.10.4	5.10.4	5.10.4	5.10.4	5.10.4
ncurses	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
networkx	3.3	3.3	3.3	3.3	3.3
nltk	3.9.1	3.9.1	3.9.1	3.9.1	3.9.1
notebook	7.2.2	7.2.2		7.2.2	7.2.2
notebook-shim	0.2.3	0.2.3		0.2.3	0.2.3
nspr	4.35	4.35			
nss	3.89.1	3.89.1			
numba	0.60.0	0.60.0		0.60.0	0.60.0
numexpr	2.8.7	2.8.7	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0		1.7.0	1.7.0
oniguruma	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2
openpyxl	3.1.5	3.1.5	3.1.5	3.1.5	3.1.5
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
orc	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
overrides	7.4.0	7.4.0		7.4.0	7.4.0
packaging	24.1	24.1	24.1	24.1	24.1
pandas	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.5.2	1.5.2		1.5.2	1.5.2
param	2.1.1	2.1.1		2.1.1	2.1.1
paramiko					
parsel	1.8.1	1.8.1		1.8.1	1.8.1
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2		
pathspec	0.10.3	0.10.3	0.10.3	0.10.3	0.10.3
patsy	0.5.6	0.5.6	0.5.6	0.5.6	0.5.6
pcre2	10.42	10.42	10.42	10.42	10.42
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
pickleshare	0.7.5	0.7.5		0.7.5	0.7.5
pillow	10.4.0	10.4.0	10.4.0	10.4.0	10.4.0
pip	24.2	24.2	24.2	24.2	24.2
pkce	1.0.3	1.0.3		1.0.3	1.0.3
pkginfo	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
plotly	5.24.1	5.24.1	5.24.1	5.24.1	5.24.1
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		3.11	3.11
prometheus_client	0.14.1	0.14.1		0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16		0.1.16	0.1.16
protobuf	4.25.3	4.25.3		4.25.3	4.25.3
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0		9.0.0	9.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	16.1.0	16.1.0	16.1.0	16.1.0	16.1.0
pyasn1	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	5	5	5	5	5
pycodestyle	2.11.1	2.11.1	2.11.1	2.11.1	2.11.1
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0		0.5.0	0.5.0
pycurl	7.45.3	7.45.3	7.45.3	7.45.3	7.45.3
pydantic	2.8.2	2.8.2		2.8.2	2.8.2
pydantic-core	2.20.1	2.20.1		2.20.1	2.20.1
pydeck	0.8.0	0.8.0		0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0		6.3.0	6.3.0
pyerfa	2.0.1.4	2.0.1.4	2.0.1.4	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0	3.2.0	3.2.0	3.2.0
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0		2.8.0	2.8.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3		3.0.3	3.0.3
pyls-spyder	0.4.0	0.4.0		0.4.0	0.4.0
pynacl					
pyobjc-core				10.1	10.1
pyobjc-framework-cocoa				10.1	10.1
pyobjc-framework-coreservices				10.1	10.1
pyobjc-framework-fsevents				10.1	10.1
pyodbc	5.1.0	5.1.0	5.1.0	5.1.0	5.1.0
pyopenssl	24.2.1	24.2.1		24.2.1	24.2.1
pyparsing	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
pyqt	5.15.10	5.15.10		5.15.10	5.15.1
pyqt5-sip	12.13.0	12.13.0		12.13.0	12.13.

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
pyqtwebengine	5.15.10	5.15.10		5.15.10	5.15.1
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.10.1	3.10.1		3.10.1	3.10.1
pytest	7.4.4	7.4.4	7.4.4	7.4.4	7.4.4
python	3.12.7	3.12.7	3.12.7	3.12.7	3.12.7
python-dateutil	2.9.0post0	2.9.0post0	2.9.0post0	2.9.0post0	2.9.0p
python-dotenv	0.21.0	0.21.0		0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7		2.0.7	2.0.7
python-libarchive-c	5.1	5.1	5.1	5.1	5.1
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0		2.0.0	2.0.0
python-lsp-jsonrpc	1.1.2	1.1.2		1.1.2	1.1.2
python-lsp-server	1.10.0	1.10.0		1.10.0	1.10.0
python-slugify	5.0.2	5.0.2		5.0.2	5.0.2
python-tzdata	2023.3	2023.3	2023.3	2023.3	2023.3
python.app				3	3
pytoolconfig	1.2.6	1.2.6		1.2.6	1.2.6
pytz	2024.1	2024.1	2024.1	2024.1	2024.1
pyviz_comms	3.0.2	3.0.2		3.0.2	3.0.2
pywavelets	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
pywin32					
pywin32-ctypes					
pywinpty					
pyxdg	0.27	0.27			
pyyaml	6.0.1	6.0.1	6.0.1	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2	25.1.2	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3		3.2.3	3.2.3
qstylizer	0.2.2	0.2.2		0.2.2	0.2.2
qt-main	5.15.2	5.15.2		5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9		5.15.9	5.15.9
qtawesome	1.3.1	1.3.1		1.3.1	1.3.1
qtconsole	5.5.1	5.5.1		5.5.1	5.5.1
qtpy	2.4.1	2.4.1		2.4.1	2.4.1
queuelib	1.6.2	1.6.2		1.6.2	1.6.2
re2	2022.04.01	2022.04.01	2022.04.01	2022.04.01	2022.0
readline	8.2	8.2	8.2	8.2	8.2
referencing	0.30.2	0.30.2	0.30.2	0.30.2	0.30.2
regex	2024.9.11	2024.9.11	2024.9.11	2024.9.11	2024.9
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
requests-file	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1		0.1.1	0.1.1
rich	13.7.1	13.7.1		13.7.1	13.7.1
rope	1.12.0	1.12.0		1.12.0	1.12.0
rpds-py	0.10.6	0.10.6	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1		1.0.1	1.0.1

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.2
s2n	1.3.27	1.3.27	1.3.27		
s3fs	2024.6.1	2024.6.1	2024.6.1	2024.6.1	2024.6
scikit-image	0.24.0	0.24.0	0.24.0	0.24.0	0.24.0
scikit-learn	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
scipy	1.13.1	1.13.1	1.13.1	1.13.1	1.13.1
scrapy	2.11.1	2.11.1		2.11.1	2.11.1
seaborn	0.13.2	0.13.2	0.13.2	0.13.2	0.13.2
secretstorage	3.3.1	3.3.1			
semver	3.0.2	3.0.2		3.0.2	3.0.2
send2trash	1.8.2	1.8.2		1.8.2	1.8.2
service_identity	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	75.1.0	75.1.0	75.1.0	75.1.0	75.1.0
sip	6.7.12	6.7.12		6.7.12	6.7.12
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1		5.2.1	5.2.1
smmap	4.0.0	4.0.0		4.0.0	4.0.0
snappy	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
sniffio	1.3.0	1.3.0		1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5	2.5	2.5
sphinx	7.3.7	7.3.7		7.3.7	7.3.7
sphinxcontrib-applehelp	1.0.2	1.0.2		1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2		1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0		2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1		1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3		1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.10	1.1.10		1.1.10	1.1.10
spyder	5.5.1	5.5.1		5.5.1	5.5.1
spyder-kernels	2.5.0	2.5.0		2.5.0	2.5.0
sqlalchemy	2.0.34	2.0.34	2.0.34	2.0.34	2.0.34
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2	0.14.2	0.14.2	0.14.2
streamlit	1.37.1	1.37.1		1.37.1	1.37.1
sympy	1.13.2	1.13.2	1.13.2	1.13.2	1.13.2
tabulate	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
tapi				1100.0.11	1000.1
tbb	2021.8.0	2021.8.0		2021.8.0	2021.8
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.3	8.2.3	8.2.3	8.2.3	8.2.3
terminado	0.17.1	0.17.1		0.17.1	0.17.1
text-unidecode	1.3	1.3		1.3	1.3
textdistance	4.2.1	4.2.1		4.2.1	4.2.1
threadpoolctl	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0
three-merge	0.1.1	0.1.1		0.1.1	0.1.1
tifffile	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tldextract	5.1.2	5.1.2		5.1.2	5.1.2
toml	0.10.2	0.10.2		0.10.2	0.10.2
tomli	2.0.1	2.0.1		2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.4.1	6.4.1	6.4.1	6.4.1	6.4.1
tqdm	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5
traitlets	5.14.3	5.14.3	5.14.3	5.14.3	5.14.3
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
twisted	23.10.0	23.10.0		23.10.0	23.10.(
twisted-iocpsupport					
typing-extensions	4.11.0	4.11.0	4.11.0	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0	4.11.0	4.11.0	4.11.0
tzdata	2024b	2024b	2024b	2024b	2024b
uc-micro-py	1.0.1	1.0.1		1.0.1	1.0.1
ujson	5.10.0	5.10.0		5.10.0	5.10.0
unicodedata2	15.1.0	15.1.0	15.1.0	15.1.0	15.1.0
unidecode	1.3.8	1.3.8		1.3.8	1.3.8
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
utf8proc	2.6.1	2.6.1	2.6.1	2.6.1	2.6.1
vc					
vs2015_runtime					
w3lib	1.21.0	2.1.2		2.1.2	2.1.2
watchdog	4.0.1	4.0.1		4.0.1	4.0.1
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0		1.8.0	1.8.0
werkzeug	3.0.3	3.0.3	3.0.3	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2		1.0.2	1.0.2
wheel	0.44.0	0.44.0	0.44.0	0.44.0	0.44.0
widgetsnbextension	3.6.6	3.6.6		3.6.6	3.6.6
win_inet_pton					
winpty					
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		3.0.2	3.0.2
xarray	2023.6.0	2023.6.0		2023.6.0	2023.6
xlwings				0.32.1	0.32.1
xyzservices	2022.9.0	2022.9.0	2022.9.0	2022.9.0	2022.9
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
yapf	0.40.2	0.40.2		0.40.2	0.40.2
yarl	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
zeromq	4.3.5	4.3.5	4.3.5	4.3.5	4.3.5
zfp	1.0.0			1.0.0	1.0.0
zict	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0		3.17.0	3.17.0

Table 1 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7		2.0.7	2.0.7
zope	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_anaconda_depends	2024.10	2024.10	2024.10
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
aiobotocore	2.12.3	2.12.3	2.12.3
aiohappyeyeballs	2.4.0	2.4.0	2.4.0
aiohttp	3.10.5	3.10.5	3.10.5
aioitertools	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0
alabaster	0.7.16	0.7.16	
altair	5.0.1	5.0.1	
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
anaconda-catalogs	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1	
anaconda-navigator	2.6.3	2.6.3	
anaconda-project	0.11.1	0.11.1	0.11.1
annotated-types	0.6.0	0.6.0	
anyio	4.2.0	4.2.0	
aom	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	
archspec	0.2.3	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0	
argon2-cffi-bindings	21.2.0	21.2.0	
arrow	1.2.3	1.2.3	
arrow-cpp	16.1.0	16.1.0	16.1.0
astroid	2.14.2	2.14.2	2.14.2
astropy	6.1.3	6.1.3	6.1.3
astropy-iers-data	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23
asttokens	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4	
atomicwrites	1.4.0	1.4.0	
attrs	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0	
autopep8	2.0.4	2.0.4	
aws-c-auth	0.6.19	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16	0.2.16

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Table 2 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
aws-c-event-stream	0.2.15	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55	1.10.55
babel	2.11.0	2.11.0	
bcrypt	3.2.0	3.2.0	
beautifulsoup4	4.12.3	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4	
black	24.8.0	24.8.0	24.8.0
blas	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2	1.6.2
blosc	1.21.3	1.21.3	1.21.3
bokeh	3.6.0	3.6.0	3.6.0
boltons	23.0.0	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0	1.82.0
botocore	1.34.69	1.34.69	1.34.69
bottleneck	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0	
ca-certificates	2024.9.24	2024.9.24	2024.9.24
cachetools	5.3.3	5.3.3	
certifi	2024.8.30	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1	1.17.1
cfitsio	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	
charset-normalizer	3.3.2	3.3.2	3.3.2
click	8.1.7	8.1.7	8.1.7
cloudpickle	3.0.0	3.0.0	3.0.0
colorama	0.4.6	0.4.6	0.4.6
colorcet	3.1.0	3.1.0	
comm	0.2.1	0.2.1	0.2.1
conda	24.9.2	24.9.2	24.9.2
conda-build	24.9.0	24.9.0	24.9.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-index	0.5.0	0.5.0	0.4.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0
conda-pack	0.7.1	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0	2.3.0

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Package Name	linux-64	linux-aarch64	linux-s390x
conda-package-streaming	0.10.0	0.10.0	0.10.0
conda-repo-cli	1.0.114	1.0.114	
conda-token	0.5.0	0.5.0	0.5.0
constantly	23.10.4	23.10.4	
contourpy	1.2.0	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0	
cryptography	43.0.0	43.0.0	43.0.0
cssselect	1.2.0	1.2.0	
curl	8.9.1	8.9.1	8.9.1
cycler	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28	
cytoolz	0.12.2	0.12.2	0.12.2
dask	2024.8.2	2024.8.2	2024.8.2
dask-core	2024.8.2	2024.8.2	2024.8.2
dask-expr	1.1.13	1.1.13	1.1.13
datashader	0.16.3	0.16.3	
dav1d	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18	
debugpy	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713	
dill	0.3.8	0.3.8	0.3.8
distributed	2024.8.2	2024.8.2	2024.8.2
distro	1.9.0	1.9.0	1.9.0
docstring-to-markdown	0.11	0.11	
docutils	0.18.1	0.18.1	
et_xmlfile	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3
expat	2.6.3	2.6.3	2.6.3
filelock	3.13.1	3.13.1	3.13.1
flake8	7.0.0	7.0.0	
flask	3.0.3	3.0.3	3.0.3
fmt	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1	
fonttools	4.51.0	4.51.0	4.51.0
freetype	2.12.1	2.12.1	2.12.1
frozendict	2.4.2	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0	1.4.0
fsspec	2024.6.1	2024.6.1	2024.6.1
gensim	4.3.3	4.3.3	
gflags	2.2.2	2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7	
gitpython	3.1.43	3.1.43	
glib	2.78.4	2.78.4	
glib-tools	2.78.4	2.78.4	
glog	0.5.0	0.5.0	0.5.0
greenlet	3.0.1	3.0.1	3.0.1
gst-plugins-base	1.14.1	1.14.1	

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Package Name	linux-64	linux-aarch64	linux-s390x
gstreamer	1.14.1	1.14.1	
h11	0.14.0	0.14.0	
h5py	3.11.0	3.11.0	3.11.0
hdf5	1.12.1	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1
holoviews	1.19.1	1.19.1	
httpcore	1.0.2	1.0.2	
httpx	0.27.0	0.27.0	
hvplot	0.11.0	0.11.0	
hyperlink	21.0.0	21.0.0	
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
imagecodecs	2023.1.23	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1	2.33.1
imagesize	1.4.1	1.4.1	
imbalanced-learn	0.12.3	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1	
incremental	22.10.0	22.10.0	
inflection	0.5.1	0.5.1	
iniconfig	1.1.1	1.1.1	1.1.1
intake	2.0.7	2.0.7	2.0.7
intel-openmp	2023.1.0		
intervaltree	3.1.0	3.1.0	
ipykernel	6.28.0	6.28.0	6.28.0
ipython	8.27.0	8.27.0	8.27.0
ipython_genutils	0.2.0	0.2.0	
ipywidgets	7.8.1	7.8.1	
isort	5.13.2	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0	
itemloaders	1.1.0	1.1.0	
itsdangerous	2.2.0	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1	
jedi	0.19.1	0.19.1	0.19.1
jeepney	0.7.1	0.7.1	
jellyfish	1.0.1	1.0.1	
jinja2	3.1.4	3.1.4	3.1.4
jmespath	1.0.1	1.0.1	1.0.1
joblib	1.4.2	1.4.2	1.4.2
jpeg	9e	9e	9e
jq	1.6	1.6	
json5	0.9.6	0.9.6	
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
jsonschema	4.23.0	4.23.0	4.23.0
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0	
jupyter_client	8.6.0	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2	5.7.2

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Package Name	linux-64	linux-aarch64	linux-s390x
jupyter_events	0.10.0	0.10.0	
jupyter_server	2.14.1	2.14.1	
jupyter_server_terminals	0.4.4	0.4.4	
jupyterlab	4.2.5	4.2.5	
jupyterlab-variableinspector	3.1.0	3.1.0	
jupyterlab_pygments	0.1.2	0.1.2	0.2.2
jupyterlab_server	2.27.3	2.27.3	
jupyterlab_widgets	1.0.0	1.0.0	
jxrlib	1.1	1.1	1.1
keyring	24.3.1	24.3.1	
kiwisolver	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0	1.10.0
lazy_loader	0.4	0.4	0.4
lcms2	2.12	2.12	2.12
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
lerc	3.0	3.0	3.0
libabseil	20240116.2	20240116.2	20240116.2
libaec	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.7.4
libavif	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6	
libclang13	14.0.6	14.0.6	
libcups	2.4.2	2.4.2	
libcurl	8.9.1	8.9.1	8.9.1
libdeflate	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0
libglib	2.78.4	2.78.4	
libgomp	11.2.0	11.2.0	11.2.0
libgrpc	1.62.2	1.62.2	1.62.2
libiconv	1.16	1.16	
liblief	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6	
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libopenblas		0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39

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Package Name	linux-64	linux-aarch64	linux-s390x
libpq	12.17	12.17	
libprotobuf	4.25.3	4.25.3	4.25.3
libsodium	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3	
libssh2	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5
libwebp-base	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15	
libxkbcommon	1.0.1	1.0.1	
libxml2	2.10.4	2.10.4	2.13.1
libxslt	1.1.37	1.1.37	
libzopfli	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0	
llvmlite	0.43.0	0.43.0	
locket	1.0.0	1.0.0	1.0.0
lxml	5.2.1	5.2.1	
lz4	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	
markdown	3.4.1	3.4.1	
markdown-it-py	2.2.0	2.2.0	
markupsafe	2.1.3	2.1.3	2.1.3
matplotlib	3.9.2	3.9.2	3.9.2
matplotlib-base	3.9.2	3.9.2	3.9.2
matplotlib-inline	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0	
mdurl	0.1.0	0.1.0	
menuinst	2.1.2	2.1.2	2.1.2
mistune	2.0.4	2.0.4	2.0.4
mkl	2023.1.0		
mkl-service	2.4.0		
mkl_fft	1.3.10		
mkl_random	1.2.7		
more-itertools	10.3.0	10.3.0	10.3.0
mpmath	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3
multidict	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0	
mypy	1.11.2	1.11.2	1.11.2
mypy_extensions	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24	
navigator-updater	0.5.1	0.5.1	
nbclient	0.8.0	0.8.0	0.8.0
nbconvert	7.16.4	7.16.4	7.10.0
nbformat	5.10.4	5.10.4	5.10.4

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Package Name	linux-64	linux-aarch64	linux-s390x
ncurses	6.4	6.4	6.4
nest-asyncio	1.6.0	1.6.0	1.6.0
networkx	3.3	3.3	3.3
nltk	3.9.1	3.9.1	3.9.1
notebook	7.2.2	7.2.2	
notebook-shim	0.2.3	0.2.3	
nspr	4.35	4.35	
nss	3.89.1	3.89.1	
numba	0.60.0	0.60.0	
numexpr	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0	
oniguruma	6.9.7.1	6.9.7.1	
openjpeg	2.5.2	2.5.2	2.5.2
openpyxl	3.1.5	3.1.5	3.1.5
openssl	3.0.15	3.0.15	3.0.15
orc	2.0.1	2.0.1	2.0.1
overrides	7.4.0	7.4.0	
packaging	24.1	24.1	24.1
pandas	2.2.2	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0	1.5.0
panel	1.5.2	1.5.2	
param	2.1.1	2.1.1	
parsel	1.8.1	1.8.1	
parso	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2
pathspec	0.10.3	0.10.3	0.10.3
patsy	0.5.6	0.5.6	0.5.6
pcre2	10.42	10.42	10.42
pexpect	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	
pillow	10.4.0	10.4.0	10.4.0
pip	24.2	24.2	24.2
pkce	1.0.3	1.0.3	
pkginfo	1.10.0	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0	3.10.0
plotly	5.24.1	5.24.1	5.24.1
pluggy	1.0.0	1.0.0	1.0.0
ply	3.11	3.11	
prometheus_client	0.14.1	0.14.1	
prompt-toolkit	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16	
protobuf	4.25.3	4.25.3	
psutil	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2

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Package Name	linux-64	linux-aarch64	linux-s390x
py-cpuinfo	9.0.0	9.0.0	
py-lief	0.12.3	0.12.3	0.12.3
pyarrow	16.1.0	16.1.0	16.1.0
pyasn1	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	
pybind11-abi	5	5	5
pycodestyle	2.11.1	2.11.1	2.11.1
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pyct	0.5.0	0.5.0	
pycurl	7.45.3	7.45.3	7.45.3
pydantic	2.8.2	2.8.2	
pydantic-core	2.20.1	2.20.1	
pydeck	0.8.0	0.8.0	
pydispatcher	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0	
pyerfa	2.0.1.4	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0	3.2.0
pygments	2.15.1	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0	
pylint	2.16.2	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3	
pyls-spyder	0.4.0	0.4.0	
pyodbc	5.1.0	5.1.0	5.1.0
pyopenssl	24.2.1	24.2.1	
pyparsing	3.1.2	3.1.2	3.1.2
pyqt	5.15.10	5.15.10	
pyqt5-sip	12.13.0	12.13.0	
pyqtwebengine	5.15.10	5.15.10	
pysocks	1.7.1	1.7.1	1.7.1
pytables	3.10.1	3.10.1	
pytest	7.4.4	7.4.4	7.4.4
python	3.12.7	3.12.7	3.12.7
python-dateutil	2.9.0post0	2.9.0post0	2.9.0post0
python-dotenv	0.21.0	0.21.0	
python-fastjsonschema	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	
python-libarchive-c	5.1	5.1	5.1
python-lmdb	1.4.1	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0	
python-lsp-jsonrpc	1.1.2	1.1.2	
python-lsp-server	1.10.0	1.10.0	
python-slugify	5.0.2	5.0.2	
python-tzdata	2023.3	2023.3	2023.3
pytoolconfig	1.2.6	1.2.6	
pytz	2024.1	2024.1	2024.1
pyviz_comms	3.0.2	3.0.2	
pywavelets	1.7.0	1.7.0	1.7.0
pyxdg	0.27	0.27	
pyyaml	6.0.1	6.0.1	6.0.1

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Package Name	linux-64	linux-aarch64	linux-s390x
pyzmq	25.1.2	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3	
qstylizer	0.2.2	0.2.2	
qt-main	5.15.2	5.15.2	
qt-webengine	5.15.9	5.15.9	
qtawesome	1.3.1	1.3.1	
qtconsole	5.5.1	5.5.1	
qtpy	2.4.1	2.4.1	
queuelib	1.6.2	1.6.2	
re2	2022.04.01	2022.04.01	2022.04.01
readline	8.2	8.2	8.2
referencing	0.30.2	0.30.2	0.30.2
regex	2024.9.11	2024.9.11	2024.9.11
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
requests-file	1.5.1	1.5.1	
requests-toolbelt	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	
rich	13.7.1	13.7.1	
rope	1.12.0	1.12.0	
rpds-py	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1	
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
ruamel_yaml	0.17.21	0.17.21	0.17.21
s2n	1.3.27	1.3.27	1.3.27
s3fs	2024.6.1	2024.6.1	2024.6.1
scikit-image	0.24.0	0.24.0	0.24.0
scikit-learn	1.5.1	1.5.1	1.5.1
scipy	1.13.1	1.13.1	1.13.1
scrapy	2.11.1	2.11.1	
seaborn	0.13.2	0.13.2	0.13.2
secretstorage	3.3.1	3.3.1	
semver	3.0.2	3.0.2	
send2trash	1.8.2	1.8.2	
service_identity	18.1.0	18.1.0	
setuptools	75.1.0	75.1.0	75.1.0
sip	6.7.12	6.7.12	
six	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	
smmap	4.0.0	4.0.0	
snappy	1.2.1	1.2.1	1.2.1
sniffio	1.3.0	1.3.0	
snowballstemmer	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5
sphinx	7.3.7	7.3.7	
sphinxcontrib-applehelp	1.0.2	1.0.2	

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Package Name	linux-64	linux-aarch64	linux-s390x
sphinxcontrib-devhelp	1.0.2	1.0.2	
sphinxcontrib-htmlhelp	2.0.0	2.0.0	
sphinxcontrib-jsmath	1.0.1	1.0.1	
sphinxcontrib-qthelp	1.0.3	1.0.3	
sphinxcontrib-serializinghtml	1.1.10	1.1.10	
spyder	5.5.1	5.5.1	
spyder-kernels	2.5.0	2.5.0	
sqlalchemy	2.0.34	2.0.34	2.0.34
sqlite	3.45.3	3.45.3	3.45.3
stack_data	0.2.0	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2	0.14.2
streamlit	1.37.1	1.37.1	
sympy	1.13.2	1.13.2	1.13.2
tabulate	0.9.0	0.9.0	0.9.0
tbb	2021.8.0	2021.8.0	
tblib	1.7.0	1.7.0	1.7.0
tenacity	8.2.3	8.2.3	8.2.3
terminado	0.17.1	0.17.1	
text-unidecode	1.3	1.3	
textdistance	4.2.1	4.2.1	
threadpoolctl	3.5.0	3.5.0	3.5.0
three-merge	0.1.1	0.1.1	
tifffile	2023.4.12	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1	1.2.1
tk	8.6.14	8.6.14	8.6.14
tldextract	5.1.2	5.1.2	
toml	0.10.2	0.10.2	
tomli	2.0.1	2.0.1	
tomlkit	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0
tornado	6.4.1	6.4.1	6.4.1
tqdm	4.66.5	4.66.5	4.66.5
traitlets	5.14.3	5.14.3	5.14.3
truststore	0.8.0	0.8.0	0.8.0
twisted	23.10.0	23.10.0	
typing-extensions	4.11.0	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0	4.11.0
tzdata	2024b	2024b	2024b
uc-micro-py	1.0.1	1.0.1	
ujson	5.10.0	5.10.0	
unicodedata2	15.1.0	15.1.0	15.1.0
unidecode	1.3.8	1.3.8	
unixodbc	2.3.11	2.3.11	2.3.11
urllib3	2.2.3	2.2.3	2.2.3
utf8proc	2.6.1	2.6.1	2.6.1
w3lib	1.21.0	2.1.2	
watchdog	4.0.1	4.0.1	
wcwidth	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0	

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Package Name	linux-64	linux-aarch64	linux-s390x
werkzeug	3.0.3	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2	
wheel	0.44.0	0.44.0	0.44.0
widgetsnbextension	3.6.6	3.6.6	
wrapt	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2	
xarray	2023.6.0	2023.6.0	
xyzservices	2022.9.0	2022.9.0	2022.9.0
xz	5.4.6	5.4.6	5.4.6
yaml	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0
yapf	0.40.2	0.40.2	
yarl	1.11.0	1.11.0	1.11.0
zeromq	4.3.5	4.3.5	4.3.5
zfp	1.0.0		
zict	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0	
zlib	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	
zope	1.0	1.0	
zope.interface	5.4.0	5.4.0	
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2024.10	2024.10
aiobotocore	2.12.3	2.12.3
aiohappyeyeballs	2.4.0	2.4.0
aiohttp	3.10.5	3.10.5
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
alabaster	0.7.16	0.7.16
altair	5.0.1	5.0.1
anaconda-anon-usage	0.4.4	0.4.4
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1
anaconda-navigator	2.6.3	2.6.3
anaconda-project	0.11.1	0.11.1
annotated-types	0.6.0	0.6.0
anyio	4.2.0	4.2.0
aom	3.6.0	3.6.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.3	0.1.3
appscript	1.2.5	1.2.5

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Package Name	osx-arm64	osx-64
archspec	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	16.1.0	16.1.0
astroid	2.14.2	2.14.2
astropy	6.1.3	6.1.3
astropy-iers-data	0.2024.9.2.0.33.23	0.2024.9.2.0.33.23
asttokens	2.0.5	2.0.5
async-lru	2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0
attrs	23.1.0	23.1.0
automat	20.2.0	20.2.0
autopep8	2.0.4	2.0.4
aws-c-auth	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55
babel	2.11.0	2.11.0
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4
black	24.8.0	24.8.0
blas	1.0	1.0
bleach	4.1.0	4.1.0
blinker	1.6.2	1.6.2
blosc	1.21.3	1.21.3
bokeh	3.6.0	3.6.0
boltons	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0
botocore	1.34.69	1.34.69
bottleneck	1.3.7	1.3.7
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0
ca-certificates	2024.9.24	2024.9.24
cachetools	5.3.3	5.3.3

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Package Name	osx-arm64	osx-64
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	3.3.2	3.3.2
click	8.1.7	8.1.7
cloudpickle	3.0.0	3.0.0
colorama	0.4.6	0.4.6
colorcet	3.1.0	3.1.0
comm	0.2.1	0.2.1
conda	24.9.2	24.9.2
conda-build	24.9.0	24.9.0
conda-content-trust	0.2.0	0.2.0
conda-index	0.5.0	0.5.0
conda-libmamba-solver	24.9.0	24.9.0
conda-pack	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0
conda-repo-cli	1.0.114	1.0.114
conda-token	0.5.0	0.5.0
constantly	23.10.4	23.10.4
contourpy	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0
cryptography	43.0.0	43.0.0
cssselect	1.2.0	1.2.0
curl	8.9.1	8.9.1
cycler	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28
cytoolz	0.12.2	0.12.2
dask	2024.8.2	2024.8.2
dask-core	2024.8.2	2024.8.2
dask-expr	1.1.13	1.1.13
datashader	0.16.3	0.16.3
dav1d	1.2.1	1.2.1
debugpy	1.6.7	1.6.7
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.8	0.3.8
distributed	2024.8.2	2024.8.2
distro	1.9.0	1.9.0
dmglib	0.9.5	0.9.5
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3

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Package Name	osx-arm64	osx-64
expat	2.6.3	2.6.3
filelock	3.13.1	3.13.1
flake8	7.0.0	7.0.0
flask	3.0.3	3.0.3
fmt	9.1.0	9.1.0
fonttools	4.51.0	4.51.0
freetype	2.12.1	2.12.1
frozendict	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0
fsspec	2024.6.1	2024.6.1
gensim	4.3.3	4.3.3
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
gitdb	4.0.7	4.0.7
gitpython	3.1.43	3.1.43
glib	2.78.4	2.78.4
glib-tools	2.78.4	2.78.4
glog	0.5.0	0.5.0
greenlet	3.0.1	3.0.1
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
h11	0.14.0	0.14.0
h5py	3.11.0	3.11.0
hdf5	1.12.1	1.12.1
heapdict	1.0.1	1.0.1
holoviews	1.19.1	1.19.1
httpcore	1.0.2	1.0.2
httpx	0.27.0	0.27.0
hvplot	0.11.0	0.11.0
hyperlink	21.0.0	21.0.0
icu	73.1	73.1
idna	3.7	3.7
imagecodecs	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1
incremental	22.10.0	22.10.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	2.0.7	2.0.7
intervaltree	3.1.0	3.1.0
ipykernel	6.28.0	6.28.0
ipython	8.27.0	8.27.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	7.8.1	7.8.1
isort	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0
itemloaders	1.1.0	1.1.0

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Package Name	osx-arm64	osx-64
itsdangerous	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1
jedi	0.19.1	0.19.1
jellyfish	1.0.1	1.0.1
jinja2	3.1.4	3.1.4
jmespath	1.0.1	1.0.1
joblib	1.4.2	1.4.2
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
jsonschema	4.23.0	4.23.0
jsonschema-specifications	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2
jupyter_events	0.10.0	0.10.0
jupyter_server	2.14.1	2.14.1
jupyter_server_terminals	0.4.4	0.4.4
jupyterlab	4.2.5	4.2.5
jupyterlab-variableinspector	3.1.0	3.1.0
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.27.3	2.27.3
jupyterlab_widgets	1.0.0	1.0.0
jxrlib	1.1	1.1
keyring	24.3.1	24.3.1
kiwisolver	1.4.4	1.4.4
krb5	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0
lazy_loader	0.4	0.4
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libabseil	20240116.2	20240116.2
libaec	1.0.4	1.0.4
libarchive	3.7.4	3.7.4
libavif	0.11.1	0.11.1
libboost	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.9.1	8.9.1

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Package Name	osx-arm64	osx-64
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libglib	2.78.4	2.78.4
libgrpc	1.62.2	1.62.2
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.17	12.17
libprotobuf	4.25.3	4.25.3
libsodium	1.0.18	1.0.18
libsolv	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3
libssh2	1.11.0	1.11.0
libthrift	0.15.0	0.15.0
libtiff	4.5.1	4.5.1
libwebp-base	1.3.2	1.3.2
libxml2	2.13.1	2.13.1
libxslt	1.1.41	1.1.41
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.43.0	0.43.0
locket	1.0.0	1.0.0
lxml	5.2.1	5.2.1
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.3	2.1.3
matplotlib	3.9.2	3.9.2
matplotlib-base	3.9.2	3.9.2
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
menuinst	2.1.2	2.1.2
mistune	2.0.4	2.0.4
more-itertools	10.3.0	10.3.0

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Package Name	osx-arm64	osx-64
mpmath	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3
multidict	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0
mypy	1.11.2	1.11.2
mypy_extensions	1.0.0	1.0.0
mysql	5.7.24	5.7.24
navigator-updater	0.5.1	0.5.1
nbclient	0.8.0	0.8.0
nbconvert	7.16.4	7.16.4
nbformat	5.10.4	5.10.4
ncurses	6.4	6.4
nest-asyncio	1.6.0	1.6.0
networkx	3.3	3.3
nltk	3.9.1	3.9.1
notebook	7.2.2	7.2.2
notebook-shim	0.2.3	0.2.3
numba	0.60.0	0.60.0
numexpr	2.8.7	2.8.7
numpy	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.5.2	2.5.2
openpyxl	3.1.5	3.1.5
openssl	3.0.15	3.0.15
orc	2.0.1	2.0.1
overrides	7.4.0	7.4.0
packaging	24.1	24.1
pandas	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0
panel	1.5.2	1.5.2
param	2.1.1	2.1.1
parsel	1.8.1	1.8.1
parso	0.8.3	0.8.3
partd	1.4.1	1.4.1
patch	2.7.6	2.7.6
pathspec	0.10.3	0.10.3
patsy	0.5.6	0.5.6
pcre2	10.42	10.42
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	10.4.0	10.4.0
pip	24.2	24.2
pkce	1.0.3	1.0.3
pkginfo	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0
plotly	5.24.1	5.24.1
pluggy	1.0.0	1.0.0
ply	3.11	3.11

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Package Name	osx-arm64	osx-64
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43
protego	0.1.16	0.1.16
protobuf	4.25.3	4.25.3
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0
py-lief	0.12.3	0.12.3
pyarrow	16.1.0	16.1.0
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	5	5
pycodestyle	2.11.1	2.11.1
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.3	7.45.3
pydantic	2.8.2	2.8.2
pydantic-core	2.20.1	2.20.1
pydeck	0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0
pygments	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0
pylint	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3
pyls-spyder	0.4.0	0.4.0
pyobjc-core	10.1	10.1
pyobjc-framework-cocoa	10.1	10.1
pyobjc-framework-coreservices	10.1	10.1
pyobjc-framework-fsevents	10.1	10.1
pyodbc	5.1.0	5.1.0
pyopenssl	24.2.1	24.2.1
pyparsing	3.1.2	3.1.2
pyqt	5.15.10	5.15.10
pyqt5-sip	12.13.0	12.13.0
pyqtwebengine	5.15.10	5.15.10
pysocks	1.7.1	1.7.1
pytables	3.10.1	3.10.1
pytest	7.4.4	7.4.4
python	3.12.7	3.12.7
python-dateutil	2.9.0post0	2.9.0post0
python-dotenv	0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	5.1	5.1

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Package Name	osx-arm64	osx-64
python-lmdb	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0
python-lsp-jsonrpc	1.1.2	1.1.2
python-lsp-server	1.10.0	1.10.0
python-slugify	5.0.2	5.0.2
python-tzdata	2023.3	2023.3
python.app	3	3
pytoolconfig	1.2.6	1.2.6
pytz	2024.1	2024.1
pyviz_comms	3.0.2	3.0.2
pywavelets	1.7.0	1.7.0
pyyaml	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.3.1	1.3.1
qtconsole	5.5.1	5.5.1
qtpy	2.4.1	2.4.1
queuelib	1.6.2	1.6.2
re2	2022.04.01	2022.04.01
readline	8.2	8.2
referencing	0.30.2	0.30.2
regex	2024.9.11	2024.9.11
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
requests-file	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rich	13.7.1	13.7.1
rope	1.12.0	1.12.0
rpds-py	0.10.6	0.10.6
rtree	1.0.1	1.0.1
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
ruamel_yaml	0.17.21	0.17.21
s3fs	2024.6.1	2024.6.1
scikit-image	0.24.0	0.24.0
scikit-learn	1.5.1	1.5.1
scipy	1.13.1	1.13.1
scrapy	2.11.1	2.11.1
seaborn	0.13.2	0.13.2
semver	3.0.2	3.0.2
send2trash	1.8.2	1.8.2
service_identity	18.1.0	18.1.0
setuptools	75.1.0	75.1.0
sip	6.7.12	6.7.12

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Table 3 – continued from previous page

Package Name	osx-arm64	osx-64
six	1.16.0	1.16.0
smart_open	5.2.1	5.2.1
smmap	4.0.0	4.0.0
snappy	1.2.1	1.2.1
sniffio	1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.5	2.5
sphinx	7.3.7	7.3.7
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.10	1.1.10
spyder	5.5.1	5.5.1
spyder-kernels	2.5.0	2.5.0
sqlalchemy	2.0.34	2.0.34
sqlite	3.45.3	3.45.3
stack_data	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2
streamlit	1.37.1	1.37.1
sympy	1.13.2	1.13.2
tabulate	0.9.0	0.9.0
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.3	8.2.3
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	3.5.0	3.5.0
three-merge	0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1
tk	8.6.14	8.6.14
tldextract	5.1.2	5.1.2
toml	0.10.2	0.10.2
tomli	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.4.1	6.4.1
tqdm	4.66.5	4.66.5
traitlets	5.14.3	5.14.3
truststore	0.8.0	0.8.0
twisted	23.10.0	23.10.0
typing-extensions	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0
tzdata	2024b	2024b
uc-micro-py	1.0.1	1.0.1

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Table 3 – continued from previous page

Package Name	osx-arm64	osx-64
ujson	5.10.0	5.10.0
unicodedata2	15.1.0	15.1.0
unidecode	1.3.8	1.3.8
unixodbc	2.3.11	2.3.11
urllib3	2.2.3	2.2.3
utf8proc	2.6.1	2.6.1
w3lib	2.1.2	2.1.2
watchdog	4.0.1	4.0.1
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0
werkzeug	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2
wheel	0.44.0	0.44.0
widgetsnbextension	3.6.6	3.6.6
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2023.6.0	2023.6.0
xlwings	0.32.1	0.32.1
xyzservices	2022.9.0	2022.9.0
xz	5.4.6	5.4.6
yaml	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0
yapf	0.40.2	0.40.2
yarl	1.11.0	1.11.0
zeromq	4.3.5	4.3.5
zfp	1.0.0	1.0.0
zict	3.0.0	3.0.0
zipp	3.17.0	3.17.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
_anaconda_depends	2024.10
aiobotocore	2.12.3
aiohappyeyeballs	2.4.0
aiohttp	3.10.5
aioitertools	0.7.1
aiosignal	1.2.0
alabaster	0.7.16
altair	5.0.1
anaconda-anon-usage	0.4.4

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Table 4 – continued from previous page

Package Name	win-64
anaconda-catalogs	0.2.0
anaconda-client	1.12.3
anaconda-cloud-auth	0.5.1
anaconda-navigator	2.6.3
anaconda-project	0.11.1
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
annotated-types	0.6.0
anyio	4.2.0
aom	3.6.0
appdirs	1.4.4
archspec	0.2.3
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	16.1.0
astroid	2.14.2
astropy	6.1.3
astropy-iers-data	0.2024.9.2.0.33.23
asttokens	2.0.5
async-lru	2.0.4
atomicwrites	1.4.0
attrs	23.1.0
automat	20.2.0
autopep8	2.0.4
aws-c-auth	0.6.19
aws-c-cal	0.5.20
aws-c-common	0.8.5
aws-c-compression	0.2.16
aws-c-event-stream	0.2.15
aws-c-http	0.6.25
aws-c-io	0.13.10
aws-c-mqtt	0.7.13
aws-c-s3	0.1.51
aws-c-sdkutils	0.1.6
aws-checksums	0.1.13
aws-crt-cpp	0.18.16
aws-sdk-cpp	1.10.55
babel	2.11.0
bcrypt	3.2.0
beautifulsoup4	4.12.3
binaryornot	0.4.4
black	24.8.0
blas	1.0
bleach	4.1.0
blinker	1.6.2
blosc	1.21.3
bokeh	3.6.0
boltons	23.0.0
boost-cpp	1.82.0

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Package Name	win-64
botocore	1.34.69
bottleneck	1.3.7
brotli	1.0.9
brotli-bin	1.0.9
brotli-python	1.0.9
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.12.0
ca-certificates	2024.9.24
cachetools	5.3.3
certifi	2024.8.30
cffi	1.17.1
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	3.3.2
click	8.1.7
cloudpickle	3.0.0
colorama	0.4.6
colorcet	3.1.0
comm	0.2.1
conda	24.9.2
conda-build	24.9.0
conda-content-trust	0.2.0
conda-index	0.5.0
conda-libmamba-solver	24.9.0
conda-pack	0.7.1
conda-package-handling	2.3.0
conda-package-streaming	0.10.0
conda-repo-cli	1.0.114
conda-token	0.5.0
constantly	23.10.4
contourpy	1.2.0
cookiecutter	2.6.0
cryptography	43.0.0
cssselect	1.2.0
curl	8.9.1
cycler	0.11.0
cytoolz	0.12.2
dask	2024.8.2
dask-core	2024.8.2
dask-expr	1.1.13
datashader	0.16.3
dav1d	1.2.1
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.8
distributed	2024.8.2

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Table 4 – continued from previous page

Package Name	win-64
distro	1.9.0
docstring-to-markdown	0.11
docutils	0.18.1
et_xmlfile	1.1.0
executing	0.8.3
expat	2.6.3
filelock	3.13.1
flake8	7.0.0
flask	3.0.3
fmt	9.1.0
fonttools	4.51.0
freetype	2.12.1
frozendict	2.4.2
frozenlist	1.4.0
fsspec	2024.6.1
gensim	4.3.3
gflags	2.2.2
giflib	5.2.1
gitdb	4.0.7
gitpython	3.1.43
glog	0.5.0
greenlet	3.0.1
h11	0.14.0
h5py	3.11.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.19.1
httpcore	1.0.2
httpx	0.27.0
hvplot	0.11.0
hyperlink	21.0.0
icc_rt	2022.1.0
icu	73.1
idna	3.7
imagecodecs	2023.1.23
imageio	2.33.1
imagesize	1.4.1
imbalanced-learn	0.12.3
importlib-metadata	7.0.1
incremental	22.10.0
inflection	0.5.1
iniconfig	1.1.1
intake	2.0.7
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.28.0
ipython	8.27.0
ipython_genutils	0.2.0
ipywidgets	7.8.1
isort	5.13.2

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Package Name	win-64
itemadapter	0.3.0
itemloaders	1.1.0
itsdangerous	2.2.0
jaraco.classes	3.2.1
jedi	0.19.1
jellyfish	1.0.1
jinja2	3.1.4
jmespath	1.0.1
joblib	1.4.2
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.33
jsonpointer	2.1
jsonschema	4.23.0
jsonschema-specifications	2023.7.1
jupyter	1.0.0
jupyter-lsp	2.2.0
jupyter_client	8.6.0
jupyter_console	6.6.3
jupyter_core	5.7.2
jupyter_events	0.10.0
jupyter_server	2.14.1
jupyter_server_terminals	0.4.4
jupyterlab	4.2.5
jupyterlab-variableinspector	3.1.0
jupyterlab_pygments	0.1.2
jupyterlab_server	2.27.3
jupyterlab_widgets	1.0.0
keyring	24.3.1
kiwisolver	1.4.4
krb5	1.20.1
lazy-object-proxy	1.10.0
lazy_loader	0.4
lcms2	2.12
lerc	3.0
libabseil	20240116.2
libaec	1.0.4
libarchive	3.7.4
libavif	0.11.1
libboost	1.82.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.9.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4

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Table 4 – continued from previous page

Package Name	win-64
libgrpc	1.62.2
libiconv	1.16
liblief	0.12.3
libmamba	1.5.8
libmambapy	1.5.8
libpng	1.6.39
libpq	12.17
libprotobuf	4.25.3
libsodium	1.0.18
libsolv	0.7.24
libspatialindex	1.9.3
libssh2	1.11.0
libthrift	0.15.0
libtiff	4.5.1
libwebp-base	1.3.2
libxml2	2.13.1
libxslt	1.1.41
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.43.0
locket	1.0.0
lxml	5.2.1
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.3
matplotlib	3.9.2
matplotlib-base	3.9.2
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	2.1.2
mistune	2.0.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.10
mkl_random	1.2.7
more-itertools	10.3.0
mpmath	1.3.0
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.4
multipledispatch	0.6.0
mypy	1.11.2

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Table 4 – continued from previous page

Package Name	win-64
mypy_extensions	1.0.0
navigator-updater	0.5.1
nbclient	0.8.0
nbconvert	7.16.4
nbformat	5.10.4
nest-asyncio	1.6.0
networkx	3.3
nltk	3.9.1
notebook	7.2.2
notebook-shim	0.2.3
numba	0.60.0
numexpr	2.8.7
numpy	1.26.4
numpy-base	1.26.4
numpydoc	1.7.0
openjpeg	2.5.2
openpyxl	3.1.5
openssl	3.0.15
orc	2.0.1
overrides	7.4.0
packaging	24.1
pandas	2.2.2
pandocfilters	1.5.0
panel	1.5.2
param	2.1.1
paramiko	2.8.1
parsel	1.8.1
parso	0.8.3
partd	1.4.1
pathspec	0.10.3
patsy	0.5.6
pcre2	10.42
pexpect	4.8.0
pickleshare	0.7.5
pillow	10.4.0
pip	24.2
pkce	1.0.3
pkginfo	1.10.0
platformdirs	3.10.0
plotly	5.24.1
pluggy	1.0.0
ply	3.11
prometheus_client	0.14.1
prompt-toolkit	3.0.43
prompt_toolkit	3.0.43
protego	0.1.16
protobuf	4.25.3
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2

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Table 4 – continued from previous page

Package Name	win-64
py-cpuinfo	9.0.0
py-lief	0.12.3
pyarrow	16.1.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	5
pycodestyle	2.11.1
pycosat	0.6.6
pycparser	2.21
pyct	0.5.0
pycurl	7.45.3
pydantic	2.8.2
pydantic-core	2.20.1
pydeck	0.8.0
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.1.4
pyflakes	3.2.0
pygments	2.15.1
pyjwt	2.8.0
pylint	2.16.2
pylint-venv	3.0.3
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	5.1.0
pyopenssl	24.2.1
pyparsing	3.1.2
pyqt	5.15.10
pyqt5-sip	12.13.0
pyqtwebengine	5.15.10
pysocks	1.7.1
pytables	3.10.1
pytest	7.4.4
python	3.12.7
python-dateutil	2.9.0post0
python-dotenv	0.21.0
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	5.1
python-lmdb	1.4.1
python-lsp-black	2.0.0
python-lsp-jsonrpc	1.1.2
python-lsp-server	1.10.0
python-slugify	5.0.2
python-tzdata	2023.3
pytoolconfig	1.2.6
pytz	2024.1
pyviz_comms	3.0.2
pywavelets	1.7.0
pywin32	305

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Table 4 – continued from previous page

Package Name	win-64
pywin32-ctypes	0.2.2
pywinpty	2.0.10
pyyaml	6.0.1
pyzmq	25.1.2
qdarkstyle	3.2.3
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.3.1
qtconsole	5.5.1
qtpy	2.4.1
queuelib	1.6.2
re2	2022.04.01
referencing	0.30.2
regex	2024.9.11
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
requests-file	1.5.1
requests-toolbelt	1.0.0
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.7.1
rope	1.12.0
rpds-py	0.10.6
rtree	1.0.1
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
ruamel_yaml	0.17.21
s3fs	2024.6.1
scikit-image	0.24.0
scikit-learn	1.5.1
scipy	1.13.1
scrapy	2.11.1
seaborn	0.13.2
semver	3.0.2
send2trash	1.8.2
service_identity	18.1.0
setuptools	75.1.0
sip	6.7.12
six	1.16.0
smart_open	5.2.1
smmap	4.0.0
snappy	1.2.1
sniffio	1.3.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.5
sphinx	7.3.7
sphinxcontrib-applehelp	1.0.2

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Table 4 – continued from previous page

Package Name	win-64
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.10
spyder	5.5.1
spyder-kernels	2.5.0
sqlalchemy	2.0.34
sqlite	3.45.3
stack_data	0.2.0
statsmodels	0.14.2
streamlit	1.37.1
sympy	1.13.2
tabulate	0.9.0
tbb	2021.8.0
tblib	1.7.0
tenacity	8.2.3
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	3.5.0
three-merge	0.1.1
tiffile	2023.4.12
tinycss2	1.2.1
tk	8.6.14
tldextract	5.1.2
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.4.1
tqdm	4.66.5
traitlets	5.14.3
truststore	0.8.0
twisted	23.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.11.0
typing_extensions	4.11.0
tzdata	2024b
uc-micro-py	1.0.1
ujson	5.10.0
unicodedata2	15.1.0
unidecode	1.3.8
urllib3	2.2.3
utf8proc	2.6.1
vc	14.40
vs2015_runtime	14.40.33807
w3lib	2.1.2
watchdog	4.0.1
wcwidth	0.2.5

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Table 4 – continued from previous page

Package Name	win-64
webencodings	0.5.1
websocket-client	1.8.0
werkzeug	3.0.3
whatthepatch	1.0.2
wheel	0.44.0
widgetsnbextension	3.6.6
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2023.6.0
xlwings	0.32.1
xyzservices	2022.9.0
xz	5.4.6
yaml	0.2.5
yaml-cpp	0.8.0
yapf	0.40.2
yarl	1.11.0
zeromq	4.3.5
zfp	1.0.0
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.23.0
zstd	1.5.6

Anaconda 2024.06-1 (Jun 26, 2024)

Python version: 3.12.4

User-facing Changes

For macOS pkg installers, the Anaconda Navigator auto-launcher has been has been disabled for this release due to a known bug.

The `anaconda` metapackage, which the installer provides as its base environment, was reviewed and refreshed. Here are some notable changes:

Updates to major packages:

- python 3.12.4
- conda 24.5.0
- astropy 6.1.0
- dask 2024.5.0
- networkx 3.2.1
- numpy 1.26.4
- pandas 2.2.2
- scikit-image 0.23.2
- scikit-learn 1.4.2
- scipy 1.13.1
- sphinx 7.3.7
- spyder 5.5.1

Removed:

- pytables on linux-s390x

Enhancements

- `sh` installers: progress bars are no longer rendered during batch installations.
- `sh` installers: available disk space is checked before installing Anaconda.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
_anaconda_depends	2024.06	2024.06	2024.06	2024.06	2024.0
_libgcc_mutex	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1		
abseil-cpp	20211102.0	20211102.0	20211102.0	20230802.0	20230
aiobotocore	2.12.3	2.12.3	2.12.3	2.12.3	2.12.3
aiohttp	3.9.5	3.9.5	3.9.5	3.9.5	3.9.5
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
alabaster	0.7.16	0.7.16		0.7.16	0.7.16
altair	5.0.1	5.0.1		5.0.1	5.0.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1		0.5.1	0.5.1
anaconda-navigator	2.6.0	2.6.0		2.6.0	2.6.0
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
annotated-types	0.6.0	0.6.0		0.6.0	0.6.0
anyio	4.2.0	4.2.0		4.2.0	4.2.0
aom	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices				0.3.0	0.3.0
appnope				0.1.3	0.1.3
appscript				1.1.2	1.1.2
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0		21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0		21.2.0	21.2.0
arrow	1.2.3	1.2.3		1.2.3	1.2.3
arrow-cpp	14.0.2	14.0.2	14.0.2	14.0.2	14.0.2
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	6.1.0	6.1.0	6.1.0	6.1.0	6.1.0
astropy-iers-data	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14	0.2024
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4		2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0		1.4.0	1.4.0
attrs	23.1.0	23.1.0	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	2.0.4	2.0.4		2.0.4	2.0.4
aws-c-auth	0.6.19	0.6.19	0.6.19	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20	0.5.20	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5	0.8.5	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16	0.2.16	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15	0.2.15	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25	0.6.25	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10	0.13.10	0.13.10	0.13.1
aws-c-mqtt	0.7.13	0.7.13	0.7.13	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51	0.1.51	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13	0.1.13	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16	0.18.16	0.18.16	0.18.1
aws-sdk-cpp	1.10.55	1.10.55	1.10.55	1.10.55	1.10.5
babel	2.11.0	2.11.0		2.11.0	2.11.0
bcrypt	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.3	4.12.3	4.12.3	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4		0.4.4	0.4.4
black	24.4.2	24.4.2	24.4.2	24.4.2	24.4.2
blas	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2	1.6.2	1.6.2	1.6.2
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
boost-cpp	1.82.0	1.82.0	1.82.0	1.82.0	1.82.0
botocore	1.34.69	1.34.69	1.34.69	1.34.69	1.34.6
bottleneck	1.3.7	1.3.7	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0		2.12.0	2.12.0
ca-certificates	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3
cachetools	5.3.3	5.3.3		5.3.3	5.3.3
cctools				949.0.1	949.0.
cctools_osx-64					949.0.
cctools_osx-arm64				949.0.1	
certifi	2024.6.2	2024.6.2	2024.6.2	2024.6.2	2024.6
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
cfitsio	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.1.7	8.1.7	8.1.7	8.1.7	8.1.7
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.1.0	3.1.0		3.1.0	3.1.0
comm	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
conda	24.5.0	24.5.0	24.5.0	24.5.0	24.5.0
conda-build	24.5.1	24.5.1	24.5.1	24.5.1	24.5.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-index	0.5.0	0.5.0	0.4.0	0.5.0	0.5.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
conda-pack	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
conda-repo-cli	1.0.88	1.0.88		1.0.88	1.0.88
conda-token	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
console_shortcut					
constantly	23.10.4	23.10.4		23.10.4	23.10.4
contourpy	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0		2.6.0	2.6.0
cryptography	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5
cssselect	1.2.0	1.2.0		1.2.0	1.2.0
curl	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28		2.1.28	2.1.28
cytoolz	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
dask	2024.5.0	2024.5.0	2024.5.0	2024.5.0	2024.5
dask-core	2024.5.0	2024.5.0	2024.5.0	2024.5.0	2024.5
dask-expr	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
datashader	0.16.2	0.16.2		0.16.2	0.16.2

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
dav1d	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18			
debugpy	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		20200713	20200
dill	0.3.8	0.3.8	0.3.8	0.3.8	0.3.8
distributed	2024.5.0	2024.5.0	2024.5.0	2024.5.0	2024.5
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
docstring-to-markdown	0.11	0.11		0.11	0.11
docutils	0.18.1	0.18.1		0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2
filelock	3.13.1	3.13.1	3.13.1	3.13.1	3.13.1
flake8	7.0.0	7.0.0		7.0.0	7.0.0
flask	3.0.3	3.0.3	3.0.3	3.0.3	3.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1			
fonttools	4.51.0	4.51.0	4.51.0	4.51.0	4.51.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
fsspec	2024.3.1	2024.3.1	2024.3.1	2024.3.1	2024.3
gensim	4.3.2	4.3.2		4.3.2	4.3.2
gettext				0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7		4.0.7	4.0.7
gitpython	3.1.37	3.1.37		3.1.37	3.1.37
glib	2.78.4	2.78.4		2.78.4	2.78.4
glib-tools	2.78.4	2.78.4		2.78.4	2.78.4
glog	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
greenlet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2	1.48.2	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1		1.14.1	1.14.1
gstreamer	1.14.1	1.14.1		1.14.1	1.14.1
gtest				1.14.0	1.14.0
h5py	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
hdf5	1.12.1	1.12.1	1.12.1	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.19.0	1.19.0		1.19.0	1.19.0
hvplot	0.10.0	0.10.0		0.10.0	0.10.0
hyperlink	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt					
icu	73.1	73.1	73.1	73.1	73.1
idna	3.7	3.7	3.7	3.7	3.7
imagecodecs	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1
imageio	2.33.1	2.33.1	2.33.1	2.33.1	2.33.1

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
imagesize	1.4.1	1.4.1		1.4.1	1.4.1
imbalanced-learn	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1		7.0.1	7.0.1
incremental	22.10.0	22.10.0		22.10.0	22.10.(
inflection	0.5.1	0.5.1		0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
intel-openmp	2023.1.0				
intervaltree	3.1.0	3.1.0		3.1.0	3.1.0
ipykernel	6.28.0	6.28.0	6.28.0	6.28.0	6.28.0
ipython	8.25.0	8.25.0	8.25.0	8.25.0	8.25.0
ipython_genutils	0.2.0	0.2.0		0.2.0	0.2.0
ipywidgets	7.8.1	7.8.1		7.8.1	7.8.1
isort	5.13.2	5.13.2	5.13.2	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.1.0	1.1.0		1.1.0	1.1.0
itsdangerous	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1		3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1			
jellyfish	1.0.1	1.0.1		1.0.1	1.0.1
jinja2	3.1.4	3.1.4	3.1.4	3.1.4	3.1.4
jmespath	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
joblib	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
jpeg	9e	9e	9e	9e	9e
jq	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6		0.9.6	0.9.6
jsonpatch	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1
jsonschema	4.19.2	4.19.2	4.19.2	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1	2023.7.1	2023.7
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0		2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0	8.6.0	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2	5.7.2	5.7.2	5.7.2
jupyter_events	0.10.0	0.10.0		0.10.0	0.10.0
jupyter_server	2.14.1	2.14.1		2.14.1	2.14.1
jupyter_server_terminals	0.4.4	0.4.4		0.4.4	0.4.4
jupyterlab	4.0.11	4.0.11		4.0.11	4.0.11
jupyterlab-variableinspector	3.1.0	3.1.0		3.1.0	3.1.0
jupyterlab_pygments	0.1.2	0.1.2	0.2.2	0.1.2	0.1.2
jupyterlab_server	2.25.1	2.25.1		2.25.1	2.25.1
jupyterlab_widgets	1.0.0	1.0.0		1.0.0	1.0.0
jxrlib	1.1	1.1	1.1	1.1	1.1
keyring	24.3.1	24.3.1		24.3.1	24.3.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
lazy_loader	0.4	0.4	0.4	0.4	0.4

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
lcms2	2.12	2.12	2.12	2.12	2.12
ld64				530	530
ld64_osx-64					530
ld64_osx-arm64				530	
ld_impl_linux-64	2.38				
ld_impl_linux-aarch64		2.38			
ld_impl_linux-s390x			2.38		
ldid				2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libavif	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0	1.82.0	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6		14.0.6	14.0.6
libclang13	14.0.6	14.0.6		14.0.6	14.0.6
libcups	2.4.2	2.4.2			
libcurl	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1
libcxx				14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20
libev	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0		
libgfortran				5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0		
libgfortran5	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0
libglib	2.78.4	2.78.4		2.78.4	2.78.4
libgomp	11.2.0	11.2.0	11.2.0		
libiconv	1.16	1.16		1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.17	12.17		12.17	12.17
libprotobuf	3.20.3	3.20.3	3.20.3	3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3		1.9.3	1.9.3
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0	0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5		

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
libwebp-base	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15			
libxkbcommon	1.0.1	1.0.1			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37		1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0		2.0.0	2.0.0
llvm-openmp				14.0.6	14.0.6
llvmlite	0.42.0	0.42.0		0.42.0	0.42.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	5.2.1	5.2.1		5.2.1	5.2.1
lz4	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10		2.10	2.10
m2-msys2-runtime					
m2-patch					
m2w64-libwinpthread-git					
markdown	3.4.1	3.4.1		3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0		2.2.0	2.2.0
markupsafe	2.1.3	2.1.3	2.1.3	2.1.3	2.1.3
matplotlib	3.8.4	3.8.4	3.8.4	3.8.4	3.8.4
matplotlib-base	3.8.4	3.8.4	3.8.4	3.8.4	3.8.4
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0		0.3.0	0.3.0
mdurl	0.1.0	0.1.0		0.1.0	0.1.0
menuinst	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
mistune	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
mkl	2023.1.0				
mkl-service	2.4.0				
mkl_fft	1.3.8				
mkl_random	1.2.4				
more-itertools	10.1.0	10.1.0	10.1.0	10.1.0	10.1.0
mpmath	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch					
multidict	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0		0.6.0	0.6.0
mypy	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
mypy_extensions	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24		5.7.24	5.7.24
navigator-updater	0.5.1	0.5.1		0.5.1	0.5.1
nbclient	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0	7.10.0	7.10.0	7.10.0
nbformat	5.9.2	5.9.2	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
networkx	3.2.1	3.2.1	3.2.1	3.2.1	3.2.1
nltk	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1
notebook	7.0.8	7.0.8		7.0.8	7.0.8

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
notebook-shim	0.2.3	0.2.3		0.2.3	0.2.3
nspr	4.35	4.35			
nss	3.89.1	3.89.1			
numba	0.59.1	0.59.1		0.59.1	0.59.1
numexpr	2.8.7	2.8.7	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0		1.7.0	1.7.0
oniguruma	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0
openpyxl	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
openssl	3.0.14	3.0.14	3.0.14	3.0.14	3.0.14
orc	1.7.4	1.7.4	1.7.4	1.7.4	1.7.4
overrides	7.4.0	7.4.0		7.4.0	7.4.0
packaging	23.2	23.2	23.2	23.2	23.2
pandas	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.4.4	1.4.4		1.4.4	1.4.4
param	2.1.0	2.1.0		2.1.0	2.1.0
paramiko					
parsel	1.8.1	1.8.1		1.8.1	1.8.1
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2		
pathspec	0.10.3	0.10.3	0.10.3	0.10.3	0.10.3
patsy	0.5.6	0.5.6	0.5.6	0.5.6	0.5.6
pcre2	10.42	10.42	10.42	10.42	10.42
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5		0.7.5	0.7.5
pillow	10.3.0	10.3.0	10.3.0	10.3.0	10.3.0
pip	24.0	24.0	24.0	24.0	24.0
pkce	1.0.3	1.0.3		1.0.3	1.0.3
pkginfo	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
plotly	5.22.0	5.22.0	5.22.0	5.22.0	5.22.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		3.11	3.11
powershell_shortcut					
prometheus_client	0.14.1	0.14.1		0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16		0.1.16	0.1.16
protobuf	3.20.3	3.20.3		3.20.3	3.20.3
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0		9.0.0	9.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2	14.0.2	14.0.2	14.0.2

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
pyasn1	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	5	5	5	5	5
pycodestyle	2.11.1	2.11.1	2.11.1	2.11.1	2.11.1
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0		0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydantic	2.5.3	2.5.3		2.5.3	2.5.3
pydantic-core	2.14.6	2.14.6		2.14.6	2.14.6
pydeck	0.8.0	0.8.0		0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0		6.3.0	6.3.0
pyerfa	2.0.1.4	2.0.1.4	2.0.1.4	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0	3.2.0	3.2.0	3.2.0
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0		2.8.0	2.8.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3		3.0.3	3.0.3
pyls-spyder	0.4.0	0.4.0		0.4.0	0.4.0
pynacl					
pyobjc-core				10.1	10.1
pyobjc-framework-cocoa				10.1	10.1
pyobjc-framework-coreservices				10.1	10.1
pyobjc-framework-fsevents				10.1	10.1
pyodbc	5.0.1	5.0.1	5.0.1	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0		24.0.0	24.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.10	5.15.10		5.15.10	5.15.1
pyqt5-sip	12.13.0	12.13.0		12.13.0	12.13.
pyqtwebengine	5.15.10	5.15.10		5.15.10	5.15.1
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.9.2	3.9.2		3.9.2	3.9.2
pytest	7.4.4	7.4.4	7.4.4	7.4.4	7.4.4
python	3.12.4	3.12.4	3.12.4	3.12.4	3.12.4
python-dateutil	2.9.0post0	2.9.0post0	2.9.0post0	2.9.0post0	2.9.0p
python-dotenv	0.21.0	0.21.0		0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7		2.0.7	2.0.7
python-libarchive-c	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0		2.0.0	2.0.0
python-lsp-jsonrpc	1.1.2	1.1.2		1.1.2	1.1.2
python-lsp-server	1.10.0	1.10.0		1.10.0	1.10.0
python-slugify	5.0.2	5.0.2		5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3	2023.3	2023.3
python.app				3	3
pytoolconfig	1.2.6	1.2.6		1.2.6	1.2.6
pytz	2024.1	2024.1	2024.1	2024.1	2024.1

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
pyviz_comms	3.0.2	3.0.2		3.0.2	3.0.2
pywavelets	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pywin32					
pywin32-ctypes					
pywinpty					
pyxdg	0.27	0.27			
pyyaml	6.0.1	6.0.1	6.0.1	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2	25.1.2	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3		3.2.3	3.2.3
qstylizer	0.2.2	0.2.2		0.2.2	0.2.2
qt-main	5.15.2	5.15.2		5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9		5.15.9	5.15.9
qtawesome	1.2.2	1.2.2		1.2.2	1.2.2
qtconsole	5.5.1	5.5.1		5.5.1	5.5.1
qtpy	2.4.1	2.4.1		2.4.1	2.4.1
queuelib	1.6.2	1.6.2		1.6.2	1.6.2
re2	2022.04.01	2022.04.01	2022.04.01	2022.04.01	2022.0
readline	8.2	8.2	8.2	8.2	8.2
referencing	0.30.2	0.30.2	0.30.2	0.30.2	0.30.2
regex	2023.10.3	2023.10.3	2023.10.3	2023.10.3	2023.1
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.2	2.32.2	2.32.2	2.32.2	2.32.2
requests-file	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1		0.1.1	0.1.1
rich	13.3.5	13.3.5		13.3.5	13.3.5
rope	1.12.0	1.12.0		1.12.0	1.12.0
rpds-py	0.10.6	0.10.6	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1		1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.2
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.2
s2n	1.3.27	1.3.27	1.3.27		
s3fs	2024.3.1	2024.3.1	2024.3.1	2024.3.1	2024.3
scikit-image	0.23.2	0.23.2	0.23.2	0.23.2	0.23.2
scikit-learn	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
scipy	1.13.1	1.13.1	1.13.1	1.13.1	1.13.1
scrapy	2.11.1	2.11.1		2.11.1	2.11.1
seaborn	0.13.2	0.13.2	0.13.2	0.13.2	0.13.2
secretstorage	3.3.1	3.3.1			
semver	3.0.2	3.0.2		3.0.2	3.0.2
send2trash	1.8.2	1.8.2		1.8.2	1.8.2
service_identity	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	69.5.1	69.5.1	69.5.1	69.5.1	69.5.1
sip	6.7.12	6.7.12		6.7.12	6.7.12
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1		5.2.1	5.2.1
smmap	4.0.0	4.0.0		4.0.0	4.0.0
snappy	1.1.10	1.1.10	1.1.10	1.1.10	1.1.10

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
sniffio	1.3.0	1.3.0		1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5	2.5	2.5
sphinx	7.3.7	7.3.7		7.3.7	7.3.7
sphinxcontrib-applehelp	1.0.2	1.0.2		1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2		1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0		2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1		1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3		1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.10	1.1.10		1.1.10	1.1.10
spyder	5.5.1	5.5.1		5.5.1	5.5.1
spyder-kernels	2.5.0	2.5.0		2.5.0	2.5.0
sqlalchemy	2.0.30	2.0.30	2.0.30	2.0.30	2.0.30
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2	0.14.2	0.14.2	0.14.2
streamlit	1.32.0	1.32.0		1.32.0	1.32.0
sympy	1.12	1.12	1.12	1.12	1.12
tabulate	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
tapi				1100.0.11	1000.1
tbb	2021.8.0	2021.8.0		2021.8.0	2021.8
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1		0.17.1	0.17.1
text-unidecode	1.3	1.3		1.3	1.3
textdistance	4.2.1	4.2.1		4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tldextract	3.2.0	3.2.0		3.2.0	3.2.0
toml	0.10.2	0.10.2		0.10.2	0.10.2
tomli	2.0.1	2.0.1		2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.4.1	6.4.1	6.4.1	6.4.1	6.4.1
tqdm	4.66.4	4.66.4	4.66.4	4.66.4	4.66.4
traitlets	5.14.3	5.14.3	5.14.3	5.14.3	5.14.3
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
twisted	23.10.0	23.10.0		23.10.0	23.10.0
twisted-iocpsupport					
typing-extensions	4.11.0	4.11.0	4.11.0	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0	4.11.0	4.11.0	4.11.0
tzdata	2024a	2024a	2024a	2024a	2024a
uc-micro-py	1.0.1	1.0.1		1.0.1	1.0.1
ujson	5.10.0	5.10.0		5.10.0	5.10.0
unicodedata2	15.1.0	15.1.0	15.1.0	15.1.0	15.1.0
unidecode	1.2.0	1.2.0		1.2.0	1.2.0

Table 5 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-6
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
utf8proc	2.6.1	2.6.1	2.6.1	2.6.1	2.6.1
vc					
vs2015_runtime					
w3lib	1.21.0	2.1.2		2.1.2	2.1.2
watchdog	4.0.1	4.0.1		4.0.1	4.0.1
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0		1.8.0	1.8.0
werkzeug	3.0.3	3.0.3	3.0.3	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2		1.0.2	1.0.2
wheel	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0
widgetsnbextension	3.6.6	3.6.6		3.6.6	3.6.6
win_inet_pton					
winpty					
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		3.0.2	3.0.2
xarray	2023.6.0	2023.6.0		2023.6.0	2023.6
xlwings				0.31.4	0.31.4
xyzservices	2022.9.0	2022.9.0	2022.9.0	2022.9.0	2022.9
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
yapf	0.40.2	0.40.2		0.40.2	0.40.2
yarl	1.9.3	1.9.3	1.9.3	1.9.3	1.9.3
zeromq	4.3.5	4.3.5	4.3.5	4.3.5	4.3.5
zfp	1.0.0			1.0.0	1.0.0
zict	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0		3.17.0	3.17.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7		2.0.7	2.0.7
zope	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_anaconda_depends	2024.06	2024.06	2024.06
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	20211102.0
aiobotocore	2.12.3	2.12.3	2.12.3
aiohttp	3.9.5	3.9.5	3.9.5
aioitertools	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0

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Package Name	linux-64	linux-aarch64	linux-s390x
alabaster	0.7.16	0.7.16	
altair	5.0.1	5.0.1	
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
anaconda-catalogs	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1	
anaconda-navigator	2.6.0	2.6.0	
anaconda-project	0.11.1	0.11.1	0.11.1
annotated-types	0.6.0	0.6.0	
anyio	4.2.0	4.2.0	
aom	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4
archspec	0.2.3	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0	
argon2-cffi-bindings	21.2.0	21.2.0	
arrow	1.2.3	1.2.3	
arrow-cpp	14.0.2	14.0.2	14.0.2
astroid	2.14.2	2.14.2	2.14.2
astropy	6.1.0	6.1.0	6.1.0
astropy-iers-data	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14
asttokens	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4	
atomicwrites	1.4.0	1.4.0	
attrs	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0	
autopep8	2.0.4	2.0.4	
aws-c-auth	0.6.19	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55	1.10.55
babel	2.11.0	2.11.0	
bcrypt	3.2.0	3.2.0	
beautifulsoup4	4.12.3	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4	
black	24.4.2	24.4.2	24.4.2
blas	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2	1.6.2
blosc	1.21.3	1.21.3	1.21.3
bokeh	3.4.1	3.4.1	3.4.1
boltons	23.0.0	23.0.0	23.0.0

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Package Name	linux-64	linux-aarch64	linux-s390x
boost-cpp	1.82.0	1.82.0	1.82.0
botocore	1.34.69	1.34.69	1.34.69
bottleneck	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0	
ca-certificates	2024.3.11	2024.3.11	2024.3.11
cachetools	5.3.3	5.3.3	
certifi	2024.6.2	2024.6.2	2024.6.2
cffi	1.16.0	1.16.0	1.16.0
cfitsio	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4
click	8.1.7	8.1.7	8.1.7
cloudpickle	2.2.1	2.2.1	2.2.1
colorama	0.4.6	0.4.6	0.4.6
colorcet	3.1.0	3.1.0	
comm	0.2.1	0.2.1	0.2.1
conda	24.5.0	24.5.0	24.5.0
conda-build	24.5.1	24.5.1	24.5.1
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-index	0.5.0	0.5.0	0.4.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0
conda-pack	0.7.1	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0
conda-repo-cli	1.0.88	1.0.88	
conda-token	0.5.0	0.5.0	0.5.0
constantly	23.10.4	23.10.4	
contourpy	1.2.0	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0	
cryptography	42.0.5	42.0.5	42.0.5
cssselect	1.2.0	1.2.0	
curl	8.7.1	8.7.1	8.7.1
cycler	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28	
cytoolz	0.12.2	0.12.2	0.12.2
dask	2024.5.0	2024.5.0	2024.5.0
dask-core	2024.5.0	2024.5.0	2024.5.0
dask-expr	1.1.0	1.1.0	1.1.0
datashader	0.16.2	0.16.2	
dav1d	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18	
debugpy	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1

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Package Name	linux-64	linux-aarch64	linux-s390x
defusedxml	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713	
dill	0.3.8	0.3.8	0.3.8
distributed	2024.5.0	2024.5.0	2024.5.0
distro	1.9.0	1.9.0	1.9.0
docstring-to-markdown	0.11	0.11	
docutils	0.18.1	0.18.1	
entrypoints	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3
expat	2.6.2	2.6.2	2.6.2
filelock	3.13.1	3.13.1	3.13.1
flake8	7.0.0	7.0.0	
flask	3.0.3	3.0.3	3.0.3
fmt	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1	
fonttools	4.51.0	4.51.0	4.51.0
freetype	2.12.1	2.12.1	2.12.1
frozendict	2.4.2	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0	1.4.0
fsspec	2024.3.1	2024.3.1	2024.3.1
gensim	4.3.2	4.3.2	
gflags	2.2.2	2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7	
gitpython	3.1.37	3.1.37	
glib	2.78.4	2.78.4	
glib-tools	2.78.4	2.78.4	
glog	0.5.0	0.5.0	0.5.0
greenlet	3.0.1	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1	
gstreamer	1.14.1	1.14.1	
h5py	3.11.0	3.11.0	3.11.0
hdf5	1.12.1	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1
holoviews	1.19.0	1.19.0	
hvplot	0.10.0	0.10.0	
hyperlink	21.0.0	21.0.0	
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
imagecodecs	2023.1.23	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1	2.33.1
imagesize	1.4.1	1.4.1	
imbalanced-learn	0.12.3	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1	
incremental	22.10.0	22.10.0	
inflection	0.5.1	0.5.1	
iniconfig	1.1.1	1.1.1	1.1.1
intake	0.7.0	0.7.0	0.7.0

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Package Name	linux-64	linux-aarch64	linux-s390x
intel-openmp	2023.1.0		
intervaltree	3.1.0	3.1.0	
ipykernel	6.28.0	6.28.0	6.28.0
ipython	8.25.0	8.25.0	8.25.0
ipython_genutils	0.2.0	0.2.0	
ipywidgets	7.8.1	7.8.1	
isort	5.13.2	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0	
itemloaders	1.1.0	1.1.0	
itsdangerous	2.2.0	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1	
jedi	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1	
jellyfish	1.0.1	1.0.1	
jinja2	3.1.4	3.1.4	3.1.4
jmespath	1.0.1	1.0.1	1.0.1
joblib	1.4.2	1.4.2	1.4.2
jpeg	9e	9e	9e
jq	1.6	1.6	
json5	0.9.6	0.9.6	
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
jsonschema	4.19.2	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0	
jupyter_client	8.6.0	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2	5.7.2
jupyter_events	0.10.0	0.10.0	
jupyter_server	2.14.1	2.14.1	
jupyter_server_terminals	0.4.4	0.4.4	
jupyterlab	4.0.11	4.0.11	
jupyterlab-variableinspector	3.1.0	3.1.0	
jupyterlab_pygments	0.1.2	0.1.2	0.2.2
jupyterlab_server	2.25.1	2.25.1	
jupyterlab_widgets	1.0.0	1.0.0	
jxrlib	1.1	1.1	1.1
keyring	24.3.1	24.3.1	
kiwisolver	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0	1.10.0
lazy_loader	0.4	0.4	0.4
lcms2	2.12	2.12	2.12
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
lerc	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2

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Package Name	linux-64	linux-aarch64	linux-s390x
libavif	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6	
libclang13	14.0.6	14.0.6	
libcups	2.4.2	2.4.2	
libcurl	8.7.1	8.7.1	8.7.1
libdeflate	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0
libglib	2.78.4	2.78.4	
libgomp	11.2.0	11.2.0	11.2.0
libiconv	1.16	1.16	
liblief	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6	
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libopenblas		0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39
libpq	12.17	12.17	
libprotobuf	3.20.3	3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3	
libssh2	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5
libwebp-base	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15	
libxkbcommon	1.0.1	1.0.1	
libxml2	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37	
libzopfli	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0	
llvmlite	0.42.0	0.42.0	
locket	1.0.0	1.0.0	1.0.0
lxml	5.2.1	5.2.1	
lz4	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	

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Package Name	linux-64	linux-aarch64	linux-s390x
markdown	3.4.1	3.4.1	
markdown-it-py	2.2.0	2.2.0	
markupsafe	2.1.3	2.1.3	2.1.3
matplotlib	3.8.4	3.8.4	3.8.4
matplotlib-base	3.8.4	3.8.4	3.8.4
matplotlib-inline	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0	
mdurl	0.1.0	0.1.0	
menuinst	2.1.1	2.1.1	2.1.1
mistune	2.0.4	2.0.4	2.0.4
mkl	2023.1.0		
mkl-service	2.4.0		
mkl_fft	1.3.8		
mkl_random	1.2.4		
more-itertools	10.1.0	10.1.0	10.1.0
mpmath	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3
multidict	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0	
mypy	1.10.0	1.10.0	1.10.0
mypy_extensions	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24	
navigator-updater	0.5.1	0.5.1	
nbclient	0.8.0	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0	7.10.0
nbformat	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4
nest-asyncio	1.6.0	1.6.0	1.6.0
networkx	3.2.1	3.2.1	3.2.1
nltk	3.8.1	3.8.1	3.8.1
notebook	7.0.8	7.0.8	
notebook-shim	0.2.3	0.2.3	
nspr	4.35	4.35	
nss	3.89.1	3.89.1	
numba	0.59.1	0.59.1	
numexpr	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0	
oniguruma	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0
openpyxl	3.1.2	3.1.2	3.1.2
openssl	3.0.14	3.0.14	3.0.14
orc	1.7.4	1.7.4	1.7.4
overrides	7.4.0	7.4.0	
packaging	23.2	23.2	23.2
pandas	2.2.2	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0	1.5.0
panel	1.4.4	1.4.4	

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Package Name	linux-64	linux-aarch64	linux-s390x
param	2.1.0	2.1.0	
parsel	1.8.1	1.8.1	
parso	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2
pathspec	0.10.3	0.10.3	0.10.3
patsy	0.5.6	0.5.6	0.5.6
pcre2	10.42	10.42	10.42
pexpect	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	
pillow	10.3.0	10.3.0	10.3.0
pip	24.0	24.0	24.0
pkce	1.0.3	1.0.3	
pkginfo	1.10.0	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0	3.10.0
plotly	5.22.0	5.22.0	5.22.0
pluggy	1.0.0	1.0.0	1.0.0
ply	3.11	3.11	
prometheus_client	0.14.1	0.14.1	
prompt-toolkit	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16	
protobuf	3.20.3	3.20.3	
psutil	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0	
py-lief	0.12.3	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2	14.0.2
pyasn1	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	
pybind11-abi	5	5	5
pycodestyle	2.11.1	2.11.1	2.11.1
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pyct	0.5.0	0.5.0	
pycurl	7.45.2	7.45.2	7.45.2
pydantic	2.5.3	2.5.3	
pydantic-core	2.14.6	2.14.6	
pydeck	0.8.0	0.8.0	
pydispatcher	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0	
pyerfa	2.0.1.4	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0	3.2.0
pygments	2.15.1	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0	
pylint	2.16.2	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3	
pyls-spyder	0.4.0	0.4.0	

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Package Name	linux-64	linux-aarch64	linux-s390x
pyodbc	5.0.1	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0	
pyparsing	3.0.9	3.0.9	3.0.9
pyqt	5.15.10	5.15.10	
pyqt5-sip	12.13.0	12.13.0	
pyqtwebengine	5.15.10	5.15.10	
pysocks	1.7.1	1.7.1	1.7.1
pytables	3.9.2	3.9.2	
pytest	7.4.4	7.4.4	7.4.4
python	3.12.4	3.12.4	3.12.4
python-dateutil	2.9.0post0	2.9.0post0	2.9.0post0
python-dotenv	0.21.0	0.21.0	
python-fastjsonschema	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	
python-libarchive-c	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0	
python-lsp-jsonrpc	1.1.2	1.1.2	
python-lsp-server	1.10.0	1.10.0	
python-slugify	5.0.2	5.0.2	
python-snappy	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3
pytoolconfig	1.2.6	1.2.6	
pytz	2024.1	2024.1	2024.1
pyviz_comms	3.0.2	3.0.2	
pywavelets	1.5.0	1.5.0	1.5.0
pyxdg	0.27	0.27	
pyyaml	6.0.1	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3	
qstylizer	0.2.2	0.2.2	
qt-main	5.15.2	5.15.2	
qt-webengine	5.15.9	5.15.9	
qtawesome	1.2.2	1.2.2	
qtconsole	5.5.1	5.5.1	
qtpy	2.4.1	2.4.1	
queuelib	1.6.2	1.6.2	
re2	2022.04.01	2022.04.01	2022.04.01
readline	8.2	8.2	8.2
referencing	0.30.2	0.30.2	0.30.2
regex	2023.10.3	2023.10.3	2023.10.3
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.2	2.32.2	2.32.2
requests-file	1.5.1	1.5.1	
requests-toolbelt	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	
rich	13.3.5	13.3.5	
rope	1.12.0	1.12.0	

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Package Name	linux-64	linux-aarch64	linux-s390x
rpds-py	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1	
ruamel.yaml	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21
s2n	1.3.27	1.3.27	1.3.27
s3fs	2024.3.1	2024.3.1	2024.3.1
scikit-image	0.23.2	0.23.2	0.23.2
scikit-learn	1.4.2	1.4.2	1.4.2
scipy	1.13.1	1.13.1	1.13.1
scrapy	2.11.1	2.11.1	
seaborn	0.13.2	0.13.2	0.13.2
secretstorage	3.3.1	3.3.1	
semver	3.0.2	3.0.2	
send2trash	1.8.2	1.8.2	
service_identity	18.1.0	18.1.0	
setuptools	69.5.1	69.5.1	69.5.1
sip	6.7.12	6.7.12	
six	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	
smmap	4.0.0	4.0.0	
snappy	1.1.10	1.1.10	1.1.10
sniffio	1.3.0	1.3.0	
snowballstemmer	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5
sphinx	7.3.7	7.3.7	
sphinxcontrib-applehelp	1.0.2	1.0.2	
sphinxcontrib-devhelp	1.0.2	1.0.2	
sphinxcontrib-htmlhelp	2.0.0	2.0.0	
sphinxcontrib-jsmath	1.0.1	1.0.1	
sphinxcontrib-qthelp	1.0.3	1.0.3	
sphinxcontrib-serializinghtml	1.1.10	1.1.10	
spyder	5.5.1	5.5.1	
spyder-kernels	2.5.0	2.5.0	
sqlalchemy	2.0.30	2.0.30	2.0.30
sqlite	3.45.3	3.45.3	3.45.3
stack_data	0.2.0	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2	0.14.2
streamlit	1.32.0	1.32.0	
sympy	1.12	1.12	1.12
tabulate	0.9.0	0.9.0	0.9.0
tbb	2021.8.0	2021.8.0	
tblib	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	
text-unidecode	1.3	1.3	
textdistance	4.2.1	4.2.1	
threadpoolctl	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1	
tiffile	2023.4.12	2023.4.12	2023.4.12

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Package Name	linux-64	linux-aarch64	linux-s390x
tinycss2	1.2.1	1.2.1	1.2.1
tk	8.6.14	8.6.14	8.6.14
tldextract	3.2.0	3.2.0	
toml	0.10.2	0.10.2	
tomli	2.0.1	2.0.1	
tomlkit	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0
tornado	6.4.1	6.4.1	6.4.1
tqdm	4.66.4	4.66.4	4.66.4
traitlets	5.14.3	5.14.3	5.14.3
truststore	0.8.0	0.8.0	0.8.0
twisted	23.10.0	23.10.0	
typing-extensions	4.11.0	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0	4.11.0
tzdata	2024a	2024a	2024a
uc-micro-py	1.0.1	1.0.1	
ujson	5.10.0	5.10.0	
unicodedata2	15.1.0	15.1.0	15.1.0
unidecode	1.2.0	1.2.0	
unixodbc	2.3.11	2.3.11	2.3.11
urllib3	2.2.2	2.2.2	2.2.2
utf8proc	2.6.1	2.6.1	2.6.1
w3lib	1.21.0	2.1.2	
watchdog	4.0.1	4.0.1	
wcwidth	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0	
werkzeug	3.0.3	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2	
wheel	0.43.0	0.43.0	0.43.0
widgetsnbextension	3.6.6	3.6.6	
wrapt	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2	
xarray	2023.6.0	2023.6.0	
xyzservices	2022.9.0	2022.9.0	2022.9.0
xz	5.4.6	5.4.6	5.4.6
yaml	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0
yapf	0.40.2	0.40.2	
yarl	1.9.3	1.9.3	1.9.3
zeromq	4.3.5	4.3.5	4.3.5
zfp	1.0.0		
zict	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0	
zlib	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	
zope	1.0	1.0	
zope.interface	5.4.0	5.4.0	
zstandard	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2024.06	2024.06
abseil-cpp	20230802.0	20230802.0
aiobotocore	2.12.3	2.12.3
aiohttp	3.9.5	3.9.5
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
alabaster	0.7.16	0.7.16
altair	5.0.1	5.0.1
anaconda-anon-usage	0.4.4	0.4.4
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3
anaconda-cloud-auth	0.5.1	0.5.1
anaconda-navigator	2.6.0	2.6.0
anaconda-project	0.11.1	0.11.1
annotated-types	0.6.0	0.6.0
anyio	4.2.0	4.2.0
aom	3.6.0	3.6.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.3	0.1.3
appscript	1.1.2	1.1.2
archspec	0.2.3	0.2.3
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	14.0.2	14.0.2
astroid	2.14.2	2.14.2
astropy	6.1.0	6.1.0
astropy-iers-data	0.2024.6.3.0.31.14	0.2024.6.3.0.31.14
asttokens	2.0.5	2.0.5
async-lru	2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0
attrs	23.1.0	23.1.0
automat	20.2.0	20.2.0
autopep8	2.0.4	2.0.4
aws-c-auth	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55
babel	2.11.0	2.11.0

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Package Name	osx-arm64	osx-64
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.3	4.12.3
binaryornot	0.4.4	0.4.4
black	24.4.2	24.4.2
blas	1.0	1.0
bleach	4.1.0	4.1.0
blinker	1.6.2	1.6.2
blosc	1.21.3	1.21.3
bokeh	3.4.1	3.4.1
boltons	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0
botocore	1.34.69	1.34.69
bottleneck	1.3.7	1.3.7
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0
ca-certificates	2024.3.11	2024.3.11
cachetools	5.3.3	5.3.3
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2024.6.2	2024.6.2
cffi	1.16.0	1.16.0
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.1.7	8.1.7
cloudpickle	2.2.1	2.2.1
colorama	0.4.6	0.4.6
colorcet	3.1.0	3.1.0
comm	0.2.1	0.2.1
conda	24.5.0	24.5.0
conda-build	24.5.1	24.5.1
conda-content-trust	0.2.0	0.2.0
conda-index	0.5.0	0.5.0
conda-libmamba-solver	24.1.0	24.1.0
conda-pack	0.7.1	0.7.1
conda-package-handling	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0
conda-repo-cli	1.0.88	1.0.88
conda-token	0.5.0	0.5.0
constantly	23.10.4	23.10.4
contourpy	1.2.0	1.2.0
cookiecutter	2.6.0	2.6.0
cryptography	42.0.5	42.0.5

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Package Name	osx-arm64	osx-64
cssselect	1.2.0	1.2.0
curl	8.7.1	8.7.1
cycler	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28
cytoolz	0.12.2	0.12.2
dask	2024.5.0	2024.5.0
dask-core	2024.5.0	2024.5.0
dask-expr	1.1.0	1.1.0
datashader	0.16.2	0.16.2
dav1d	1.2.1	1.2.1
debugpy	1.6.7	1.6.7
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.8	0.3.8
distributed	2024.5.0	2024.5.0
distro	1.9.0	1.9.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
expat	2.6.2	2.6.2
filelock	3.13.1	3.13.1
flake8	7.0.0	7.0.0
flask	3.0.3	3.0.3
fmt	9.1.0	9.1.0
fonttools	4.51.0	4.51.0
freetype	2.12.1	2.12.1
frozendict	2.4.2	2.4.2
frozenlist	1.4.0	1.4.0
fsspec	2024.3.1	2024.3.1
gensim	4.3.2	4.3.2
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
gitdb	4.0.7	4.0.7
gitpython	3.1.37	3.1.37
glib	2.78.4	2.78.4
glib-tools	2.78.4	2.78.4
glog	0.5.0	0.5.0
greenlet	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
gtest	1.14.0	1.14.0
h5py	3.11.0	3.11.0
hdf5	1.12.1	1.12.1
heapdict	1.0.1	1.0.1
holoviews	1.19.0	1.19.0

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Package Name	osx-arm64	osx-64
hvplot	0.10.0	0.10.0
hyperlink	21.0.0	21.0.0
icu	73.1	73.1
idna	3.7	3.7
imagecodecs	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.12.3	0.12.3
importlib-metadata	7.0.1	7.0.1
incremental	22.10.0	22.10.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.7.0	0.7.0
intervaltree	3.1.0	3.1.0
ipykernel	6.28.0	6.28.0
ipython	8.25.0	8.25.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	7.8.1	7.8.1
isort	5.13.2	5.13.2
itemadapter	0.3.0	0.3.0
itemloaders	1.1.0	1.1.0
itsdangerous	2.2.0	2.2.0
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	1.0.1	1.0.1
jinja2	3.1.4	3.1.4
jmespath	1.0.1	1.0.1
joblib	1.4.2	1.4.2
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
jsonschema	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3
jupyter_core	5.7.2	5.7.2
jupyter_events	0.10.0	0.10.0
jupyter_server	2.14.1	2.14.1
jupyter_server_terminals	0.4.4	0.4.4
jupyterlab	4.0.11	4.0.11
jupyterlab-variableinspector	3.1.0	3.1.0
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.25.1	2.25.1
jupyterlab_widgets	1.0.0	1.0.0
jxrlib	1.1	1.1
keyring	24.3.1	24.3.1

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Package Name	osx-arm64	osx-64
kiwisolver	1.4.4	1.4.4
krb5	1.20.1	1.20.1
lazy-object-proxy	1.10.0	1.10.0
lazy_loader	0.4	0.4
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libavif	0.11.1	0.11.1
libboost	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.7.1	8.7.1
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libglib	2.78.4	2.78.4
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.17	12.17
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3
libssh2	1.11.0	1.11.0
libthrift	0.15.0	0.15.0
libtiff	4.5.1	4.5.1
libwebp-base	1.3.2	1.3.2
libxml2	2.10.4	2.10.4
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0

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Table 7 – continued from previous page

Package Name	osx-arm64	osx-64
llvm-openmp	14.0.6	14.0.6
llvmlite	0.42.0	0.42.0
locket	1.0.0	1.0.0
lxml	5.2.1	5.2.1
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.3	2.1.3
matplotlib	3.8.4	3.8.4
matplotlib-base	3.8.4	3.8.4
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
menuinst	2.1.1	2.1.1
mistune	2.0.4	2.0.4
more-itertools	10.1.0	10.1.0
mpmath	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3
multidict	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0
mypy	1.10.0	1.10.0
mypy_extensions	1.0.0	1.0.0
mysql	5.7.24	5.7.24
navigator-updater	0.5.1	0.5.1
nbclient	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0
nbformat	5.9.2	5.9.2
ncurses	6.4	6.4
nest-asyncio	1.6.0	1.6.0
networkx	3.2.1	3.2.1
nltk	3.8.1	3.8.1
notebook	7.0.8	7.0.8
notebook-shim	0.2.3	0.2.3
numba	0.59.1	0.59.1
numexpr	2.8.7	2.8.7
numpy	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4
numpydoc	1.7.0	1.7.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.3.0	2.4.0
openpyxl	3.1.2	3.1.2
openssl	3.0.14	3.0.14
orc	1.7.4	1.7.4
overrides	7.4.0	7.4.0
packaging	23.2	23.2
pandas	2.2.2	2.2.2
pandocfilters	1.5.0	1.5.0

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Table 7 – continued from previous page

Package Name	osx-arm64	osx-64
panel	1.4.4	1.4.4
param	2.1.0	2.1.0
parsel	1.8.1	1.8.1
parso	0.8.3	0.8.3
partd	1.4.1	1.4.1
patch	2.7.6	2.7.6
pathspec	0.10.3	0.10.3
patsy	0.5.6	0.5.6
pcre2	10.42	10.42
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	10.3.0	10.3.0
pip	24.0	24.0
pkce	1.0.3	1.0.3
pkginfo	1.10.0	1.10.0
platformdirs	3.10.0	3.10.0
plotly	5.22.0	5.22.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43
protego	0.1.16	0.1.16
protobuf	3.20.3	3.20.3
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0
py-lief	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	5	5
pycodestyle	2.11.1	2.11.1
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydantic	2.5.3	2.5.3
pydantic-core	2.14.6	2.14.6
pydeck	0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.1.4	2.0.1.4
pyflakes	3.2.0	3.2.0
pygments	2.15.1	2.15.1
pyjwt	2.8.0	2.8.0
pylint	2.16.2	2.16.2
pylint-venv	3.0.3	3.0.3
pyls-spyder	0.4.0	0.4.0

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Package Name	osx-arm64	osx-64
pyobjc-core	10.1	10.1
pyobjc-framework-cocoa	10.1	10.1
pyobjc-framework-coreservices	10.1	10.1
pyobjc-framework-fsevents	10.1	10.1
pyodbc	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.10	5.15.10
pyqt5-sip	12.13.0	12.13.0
pyqtwebengine	5.15.10	5.15.10
pysocks	1.7.1	1.7.1
pytables	3.9.2	3.9.2
pytest	7.4.4	7.4.4
python	3.12.4	3.12.4
python-dateutil	2.9.0post0	2.9.0post0
python-dotenv	0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	2.0.0	2.0.0
python-lsp-jsonrpc	1.1.2	1.1.2
python-lsp-server	1.10.0	1.10.0
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-tzdata	2023.3	2023.3
python.app	3	3
pytoolconfig	1.2.6	1.2.6
pytz	2024.1	2024.1
pyviz_comms	3.0.2	3.0.2
pywavelets	1.5.0	1.5.0
pyyaml	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2
qdarkstyle	3.2.3	3.2.3
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.5.1	5.5.1
qtpy	2.4.1	2.4.1
queuelib	1.6.2	1.6.2
re2	2022.04.01	2022.04.01
readline	8.2	8.2
referencing	0.30.2	0.30.2
regex	2023.10.3	2023.10.3
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.2	2.32.2
requests-file	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0

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Package Name	osx-arm64	osx-64
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rich	13.3.5	13.3.5
rope	1.12.0	1.12.0
rpds-py	0.10.6	0.10.6
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2024.3.1	2024.3.1
scikit-image	0.23.2	0.23.2
scikit-learn	1.4.2	1.4.2
scipy	1.13.1	1.13.1
scrapy	2.11.1	2.11.1
seaborn	0.13.2	0.13.2
semver	3.0.2	3.0.2
send2trash	1.8.2	1.8.2
service_identity	18.1.0	18.1.0
setuptools	69.5.1	69.5.1
sip	6.7.12	6.7.12
six	1.16.0	1.16.0
smart_open	5.2.1	5.2.1
smmap	4.0.0	4.0.0
snappy	1.1.10	1.1.10
sniffio	1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.5	2.5
sphinx	7.3.7	7.3.7
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.10	1.1.10
spyder	5.5.1	5.5.1
spyder-kernels	2.5.0	2.5.0
sqlalchemy	2.0.30	2.0.30
sqlite	3.45.3	3.45.3
stack_data	0.2.0	0.2.0
statsmodels	0.14.2	0.14.2
streamlit	1.32.0	1.32.0
sympy	1.12	1.12
tabulate	0.9.0	0.9.0
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1

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Package Name	osx-arm64	osx-64
threadpoolctl	2.2.0	2.2.0
three-merge	0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1
tk	8.6.14	8.6.14
tldextract	3.2.0	3.2.0
toml	0.10.2	0.10.2
tomli	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.4.1	6.4.1
tqdm	4.66.4	4.66.4
traitlets	5.14.3	5.14.3
truststore	0.8.0	0.8.0
twisted	23.10.0	23.10.0
typing-extensions	4.11.0	4.11.0
typing_extensions	4.11.0	4.11.0
tzdata	2024a	2024a
uc-micro-py	1.0.1	1.0.1
ujson	5.10.0	5.10.0
unicodedata2	15.1.0	15.1.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	2.2.2	2.2.2
utf8proc	2.6.1	2.6.1
w3lib	2.1.2	2.1.2
watchdog	4.0.1	4.0.1
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	1.8.0	1.8.0
werkzeug	3.0.3	3.0.3
whatthepatch	1.0.2	1.0.2
wheel	0.43.0	0.43.0
widgetsnbextension	3.6.6	3.6.6
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2023.6.0	2023.6.0
xlwings	0.31.4	0.31.4
xyzservices	2022.9.0	2022.9.0
xz	5.4.6	5.4.6
yaml	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0
yapf	0.40.2	0.40.2
yarl	1.9.3	1.9.3
zeromq	4.3.5	4.3.5
zfp	1.0.0	1.0.0
zict	3.0.0	3.0.0
zipp	3.17.0	3.17.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7

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Package Name	osx-arm64	osx-64
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.22.0	0.22.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2024.06
abseil-cpp	20211102.0
aiobotocore	2.12.3
aiohttp	3.9.5
aioitertools	0.7.1
aiosignal	1.2.0
alabaster	0.7.16
altair	5.0.1
anaconda-anon-usage	0.4.4
anaconda-catalogs	0.2.0
anaconda-client	1.12.3
anaconda-cloud-auth	0.5.1
anaconda-navigator	2.6.0
anaconda-project	0.11.1
annotated-types	0.6.0
anyio	4.2.0
aom	3.6.0
appdirs	1.4.4
archspec	0.2.3
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	14.0.2
astroid	2.14.2
astropy	6.1.0
astropy-iers-data	0.2024.6.3.0.31.14
asttokens	2.0.5
async-lru	2.0.4
atomicwrites	1.4.0
attrs	23.1.0
automat	20.2.0
autopep8	2.0.4
aws-c-auth	0.6.19
aws-c-cal	0.5.20
aws-c-common	0.8.5
aws-c-compression	0.2.16
aws-c-event-stream	0.2.15
aws-c-http	0.6.25
aws-c-io	0.13.10
aws-c-mqtt	0.7.13

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Package Name	win-64
aws-c-s3	0.1.51
aws-c-sdkutils	0.1.6
aws-checksums	0.1.13
aws-crt-cpp	0.18.16
aws-sdk-cpp	1.10.55
babel	2.11.0
bcrypt	3.2.0
beautifulsoup4	4.12.3
binaryornot	0.4.4
black	24.4.2
blas	1.0
bleach	4.1.0
blinker	1.6.2
blosc	1.21.3
bokeh	3.4.1
boltons	23.0.0
boost-cpp	1.82.0
botocore	1.34.69
bottleneck	1.3.7
brotli	1.0.9
brotli-bin	1.0.9
brotli-python	1.0.9
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.12.0
ca-certificates	2024.3.11
cachetools	5.3.3
certifi	2024.6.2
cffi	1.16.0
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.1.7
cloudpickle	2.2.1
colorama	0.4.6
colorcet	3.1.0
comm	0.2.1
conda	24.5.0
conda-build	24.5.1
conda-content-trust	0.2.0
conda-index	0.5.0
conda-libmamba-solver	24.1.0
conda-pack	0.7.1
conda-package-handling	2.3.0
conda-package-streaming	0.10.0
conda-repo-cli	1.0.88
conda-token	0.5.0
console_shortcut	0.1.1
constantly	23.10.4

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Package Name	win-64
contourpy	1.2.0
cookiecutter	2.6.0
cryptography	42.0.5
cssselect	1.2.0
curl	8.7.1
cycler	0.11.0
cytoolz	0.12.2
dask	2024.5.0
dask-core	2024.5.0
dask-expr	1.1.0
datashader	0.16.2
dav1d	1.2.1
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.8
distributed	2024.5.0
distro	1.9.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
expat	2.6.2
filelock	3.13.1
flake8	7.0.0
flask	3.0.3
fmt	9.1.0
fonttools	4.51.0
freetype	2.12.1
frozendict	2.4.2
frozenlist	1.4.0
fsspec	2024.3.1
gensim	4.3.2
gflags	2.2.2
giflib	5.2.1
gitdb	4.0.7
gitpython	3.1.37
glog	0.5.0
greenlet	3.0.1
grpc-cpp	1.48.2
h5py	3.11.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.19.0
hvplot	0.10.0
hyperlink	21.0.0
icc_rt	2022.1.0
icu	73.1

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Package Name	win-64
idna	3.7
imagecodecs	2023.1.23
imageio	2.33.1
imagesize	1.4.1
imbalanced-learn	0.12.3
importlib-metadata	7.0.1
incremental	22.10.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.7.0
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.28.0
ipython	8.25.0
ipython_genutils	0.2.0
ipywidgets	7.8.1
isort	5.13.2
itemadapter	0.3.0
itemloaders	1.1.0
itsdangerous	2.2.0
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	1.0.1
jinja2	3.1.4
jmespath	1.0.1
joblib	1.4.2
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.33
jsonpointer	2.1
jsonschema	4.19.2
jsonschema-specifications	2023.7.1
jupyter	1.0.0
jupyter-lsp	2.2.0
jupyter_client	8.6.0
jupyter_console	6.6.3
jupyter_core	5.7.2
jupyter_events	0.10.0
jupyter_server	2.14.1
jupyter_server_terminals	0.4.4
jupyterlab	4.0.11
jupyterlab-variableinspector	3.1.0
jupyterlab_pygments	0.1.2
jupyterlab_server	2.25.1
jupyterlab_widgets	1.0.0
keyring	24.3.1
kiwisolver	1.4.4
krb5	1.20.1
lazy-object-proxy	1.10.0

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Package Name	win-64
lazy_loader	0.4
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libavif	0.11.1
libboost	1.82.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.7.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4
libiconv	1.16
liblief	0.12.3
libmamba	1.5.8
libmambapy	1.5.8
libpng	1.6.39
libpq	12.17
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.24
libspatialindex	1.9.3
libssh2	1.11.0
libthrift	0.15.0
libtiff	4.5.1
libwebp-base	1.3.2
libxml2	2.10.4
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.42.0
locket	1.0.0
lxml	5.2.1
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.3
matplotlib	3.8.4
matplotlib-base	3.8.4
matplotlib-inline	0.1.6
mccabe	0.7.0

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Package Name	win-64
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	2.1.1
mistune	2.0.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.8
mkl_random	1.2.4
more-itertools	10.1.0
mpmath	1.3.0
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.4
multipledispatch	0.6.0
mypy	1.10.0
mypy_extensions	1.0.0
navigator-updater	0.5.1
nbclient	0.8.0
nbconvert	7.10.0
nbformat	5.9.2
nest-asyncio	1.6.0
networkx	3.2.1
nltk	3.8.1
notebook	7.0.8
notebook-shim	0.2.3
numba	0.59.1
numexpr	2.8.7
numpy	1.26.4
numpy-base	1.26.4
numpydoc	1.7.0
openjpeg	2.4.0
openpyxl	3.1.2
openssl	3.0.14
orc	1.7.4
overrides	7.4.0
packaging	23.2
pandas	2.2.2
pandocfilters	1.5.0
panel	1.4.4
param	2.1.0
paramiko	2.8.1
parsel	1.8.1
parso	0.8.3
partd	1.4.1
pathspec	0.10.3
patsy	0.5.6
pcre2	10.42
pexpect	4.8.0
pickleshare	0.7.5
pillow	10.3.0

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Package Name	win-64
pip	24.0
pkce	1.0.3
pkginfo	1.10.0
platformdirs	3.10.0
plotly	5.22.0
pluggy	1.0.0
ply	3.11
powershell_shortcut	0.0.1
prometheus_client	0.14.1
prompt-toolkit	3.0.43
prompt_toolkit	3.0.43
protego	0.1.16
protobuf	3.20.3
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	9.0.0
py-lief	0.12.3
pyarrow	14.0.2
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	5
pycodestyle	2.11.1
pycosat	0.6.6
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydantic	2.5.3
pydantic-core	2.14.6
pydeck	0.8.0
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.1.4
pyflakes	3.2.0
pygments	2.15.1
pyjwt	2.8.0
pylint	2.16.2
pylint-venv	3.0.3
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	5.0.1
pyopenssl	24.0.0
pyparsing	3.0.9
pyqt	5.15.10
pyqt5-sip	12.13.0
pyqtwebengine	5.15.10
pysocks	1.7.1
pytables	3.9.2
pytest	7.4.4
python	3.12.4

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Table 8 – continued from previous page

Package Name	win-64
python-dateutil	2.9.0post0
python-dotenv	0.21.0
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	2.0.0
python-lsp-jsonrpc	1.1.2
python-lsp-server	1.10.0
python-slugify	5.0.2
python-snappy	0.6.1
python-tzdata	2023.3
pytoolconfig	1.2.6
pytz	2024.1
pyviz_comms	3.0.2
pywavelets	1.5.0
pywin32	305
pywin32-ctypes	0.2.2
pywinpty	2.0.10
pyyaml	6.0.1
pyzmq	25.1.2
qdarkstyle	3.2.3
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.5.1
qtpy	2.4.1
queuelib	1.6.2
re2	2022.04.01
referencing	0.30.2
regex	2023.10.3
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.2
requests-file	1.5.1
requests-toolbelt	1.0.0
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.3.5
rope	1.12.0
rpds-py	0.10.6
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21
s3fs	2024.3.1
scikit-image	0.23.2
scikit-learn	1.4.2
scipy	1.13.1
scrapy	2.11.1

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Table 8 – continued from previous page

Package Name	win-64
seaborn	0.13.2
semver	3.0.2
send2trash	1.8.2
service_identity	18.1.0
setuptools	69.5.1
sip	6.7.12
six	1.16.0
smart_open	5.2.1
smmap	4.0.0
snappy	1.1.10
sniffio	1.3.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.5
sphinx	7.3.7
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.10
spyder	5.5.1
spyder-kernels	2.5.0
sqlalchemy	2.0.30
sqlite	3.45.3
stack_data	0.2.0
statsmodels	0.14.2
streamlit	1.32.0
sympy	1.12
tabulate	0.9.0
tbb	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tifffile	2023.4.12
tinycss2	1.2.1
tk	8.6.14
tldextract	3.2.0
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.4.1
tqdm	4.66.4
traitlets	5.14.3
truststore	0.8.0

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Table 8 – continued from previous page

Package Name	win-64
twisted	23.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.11.0
typing_extensions	4.11.0
tzdata	2024a
uc-micro-py	1.0.1
ujson	5.10.0
unicodedata2	15.1.0
unidecode	1.2.0
urllib3	2.2.2
utf8proc	2.6.1
vc	14.2
vs2015_runtime	14.29.30133
w3lib	2.1.2
watchdog	4.0.1
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	1.8.0
werkzeug	3.0.3
whatthepatch	1.0.2
wheel	0.43.0
widgetsnbextension	3.6.6
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2023.6.0
xlwings	0.31.4
xyzservices	2022.9.0
xz	5.4.6
yaml	0.2.5
yaml-cpp	0.8.0
yapf	0.40.2
yarl	1.9.3
zeromq	4.3.5
zfp	1.0.0
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.22.0
zstd	1.5.5

Anaconda 2024.02-1 (Feb 26, 2024)

Python version: 3.11.7

User-facing Changes

The anaconda meta package, which the installer provides as its base environment, was reviewed and refreshed. Here are some notable changes:

Updates to major packages:

- conda 24.1.2
- numpy 1.26.3
- pandas 2.1.4
- notebook 7.0.8
- jupyterlab 4.0.11

Added:

- jupyterlab-variableinspector
- mypy
- pycodestyle
- streamlit

Removed:

- python-kaliedo
- dal and daal4py
- scikit-learn-intelex and intel-openmp
- tbb4py
- transformers
- unixodbc

Bug Fixes

- macOS `.pkg` installers install into `/opt` now to circumvent this issue. The user will be prompted for authorization when using the new default path. The macOS `.sh` installers remain unchanged.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_anaconda_depends	2024.02	2024.02	2024.02	2024.02	2024.02	2024.02
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
abseil-cpp	20211102.0	20211102.0		20230802.0	20230802.0	202111
aiobotocore	2.7.0	2.7.0	2.7.0	2.7.0	2.7.0	2.7.0
aiohttp	3.9.3	3.9.3	3.9.3	3.9.3	3.9.3	3.9.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
alabaster	0.7.12	0.7.12		0.7.12	0.7.12	0.7.12
altair	5.0.1	5.0.1		5.0.1	5.0.1	5.0.1
anaconda-anon-usage	0.4.3	0.4.3	0.4.3	0.4.3	0.4.3	0.4.3
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.1.4	0.1.4		0.1.4	0.1.4	0.1.4
anaconda-navigator	2.5.2	2.5.2		2.5.2	2.5.2	2.5.2
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anyio	4.2.0	4.2.0	3.5.0	4.2.0	4.2.0	4.2.0
aom	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices				0.3.0	0.3.0	
appnope				0.1.2	0.1.2	
appscript				1.1.2	1.1.2	
archspec	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3		1.2.3	1.2.3	1.2.3
arrow-cpp	14.0.2	14.0.2		14.0.2	14.0.2	14.0.2
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.3.4	5.3.4	5.3.4	5.3.4	5.3.4	5.3.4
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4		2.0.4	2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0		1.4.0	1.4.0	1.4.0
attrs	23.1.0	23.1.0	23.1.0	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0		20.2.0	20.2.0	20.2.0
autopep8	1.6.0	1.6.0		1.6.0	1.6.0	1.6.0
aws-c-auth	0.6.19	0.6.19		0.6.19	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20		0.5.20	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5		0.8.5	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16		0.2.16	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15		0.2.15	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25		0.6.25	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10		0.13.10	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13		0.7.13	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51		0.1.51	0.1.51	0.1.51

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
aws-c-sdkutils	0.1.6	0.1.6		0.1.6	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13		0.1.13	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16		0.18.16	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55		1.10.55	1.10.55	1.10.55
babel	2.11.0	2.11.0		2.11.0	2.11.0	2.11.0
backports	1.1	1.1	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0		3.2.0	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4		0.4.4	0.4.4	0.4.4
black	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0
blas	1.0	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2		1.6.2	1.6.2	1.6.2
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.3.4	3.3.4	2.4.3	3.3.4	3.3.4	3.3.4
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0		1.82.0	1.82.0	1.82.0
botocore	1.31.64	1.31.64	1.31.64	1.31.64	1.31.64	1.31.64
bottleneck	1.3.7	1.3.7	1.3.7	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1		0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0		2.12.0	2.12.0	2.12.0
ca-certificates	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12.
cachetools	4.2.2	4.2.2		4.2.2	4.2.2	4.2.2
cctools				949.0.1	949.0.1	
cctools_osx-64					949.0.1	
cctools_osx-arm64				949.0.1		
certifi	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
cfitsio	3.470	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0		2.2.0	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.1.7	8.1.7	8.1.7	8.1.7	8.1.7	8.1.7
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2		1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2
conda-build	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-index	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
conda-libmamba-solver	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75		1.0.75	1.0.75	1.0.75
conda-token	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2
console_shortcut						0.1.1
constantly	23.10.4	23.10.4		23.10.4	23.10.4	23.10.4
contourpy	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
cookiecutter	2.5.0	2.5.0		2.5.0	2.5.0	2.5.0
cryptography	42.0.2	42.0.2	42.0.2	42.0.2	42.0.2	42.0.2
cssselect	1.2.0	1.2.0		1.2.0	1.2.0	1.2.0
curl	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28		2.1.28	2.1.28	
cytoolz	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
dask	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.
dask-core	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.
datashader	0.16.0	0.16.0		0.16.0	0.16.0	0.16.0
dav1d	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18				
debugpy	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		20200713	20200713	202007
dill	0.3.7	0.3.7	0.3.7	0.3.7	0.3.7	0.3.7
distributed	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.0	2023.11.
distro	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
docstring-to-markdown	0.11	0.11		0.11	0.11	0.11
docutils	0.18.1	0.18.1		0.18.1	0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.5.0	2.5.0				
filelock	3.13.1	3.13.1	3.13.1	3.13.1	3.13.1	3.13.1
flake8	6.0.0	6.0.0		6.0.0	6.0.0	6.0.0
flask	2.2.5	2.2.5	2.2.5	2.2.5	2.2.5	2.2.5
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1				
fonttools	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
fsspec	2023.10.0	2023.10.0	2023.10.0	2023.10.0	2023.10.0	2023.10.
future	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0		4.3.0	4.3.0	4.3.0
gettext				0.21.0	0.21.0	
gflags	2.2.2	2.2.2		2.2.2	2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7		4.0.7	4.0.7	4.0.7

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
gitpython	3.1.37	3.1.37		3.1.37	3.1.37	3.1.37
glib	2.78.4	2.78.4		2.78.4	2.78.4	
glib-tools	2.78.4	2.78.4		2.78.4	2.78.4	
glog	0.5.0	0.5.0		0.5.0	0.5.0	0.5.0
gmp	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1	
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2		1.48.2	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1		1.14.1	1.14.1	
gstreamer	1.14.1	1.14.1		1.14.1	1.14.1	
gtest				1.14.0	1.14.0	
h5py	3.9.0	3.9.0	3.7.0	3.9.0	3.9.0	3.9.0
hdf5	1.12.1	1.12.1	1.10.6	1.12.1	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.18.3	1.18.3	1.14.8	1.18.3	1.18.3	1.18.3
hvplot	0.9.2	0.9.2	0.7.3	0.9.2	0.9.2	0.9.2
hyperlink	21.0.0	21.0.0		21.0.0	21.0.0	21.0.0
icc_rt						2022.1.0
icu	73.1	73.1	73.1	73.1	73.1	73.1
idna	3.4	3.4	3.3	3.4	3.4	3.4
imagecodecs	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1.2
imageio	2.33.1	2.33.1	2.33.1	2.33.1	2.33.1	2.33.1
imagesize	1.4.1	1.4.1		1.4.1	1.4.1	1.4.1
imbalanced-learn	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
importlib-metadata	7.0.1	7.0.1	7.0.1	7.0.1	7.0.1	7.0.1
importlib_metadata	7.0.1	7.0.1		7.0.1	7.0.1	7.0.1
incremental	22.10.0	22.10.0		22.10.0	22.10.0	22.10.0
inflection	0.5.1	0.5.1		0.5.1	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0					2023.1.0
intervaltree	3.1.0	3.1.0		3.1.0	3.1.0	3.1.0
ipykernel	6.28.0	6.28.0	6.25.0	6.28.0	6.28.0	6.28.0
ipython	8.20.0	8.20.0	8.20.0	8.20.0	8.20.0	8.20.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	7.6.5	7.6.5		7.6.5	7.6.5	7.6.5
isort	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0		0.3.0	0.3.0	0.3.0
itemloaders	1.1.0	1.1.0		1.1.0	1.1.0	1.1.0
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1		3.2.1	3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1				
jellyfish	1.0.1	1.0.1		1.0.1	1.0.1	1.0.1
jinja2	3.1.3	3.1.3	3.1.3	3.1.3	3.1.3	3.1.3
jmespath	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
joblib	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e	9e	9e
jq	1.6	1.6		1.6	1.6	1.6
json5	0.9.6	0.9.6		0.9.6	0.9.6	0.9.6

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
jsonschema	4.19.2	4.19.2	4.19.2	4.19.2	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1	2023.7.1	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0		2.2.0	2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0	7.4.9	8.6.0	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.5.0	5.5.0	5.5.0	5.5.0	5.5.0	5.5.0
jupyter_events	0.8.0	0.8.0		0.8.0	0.8.0	0.8.0
jupyter_server	2.10.0	2.10.0	1.23.4	2.10.0	2.10.0	2.10.0
jupyter_server_terminals	0.4.4	0.4.4		0.4.4	0.4.4	0.4.4
jupyterlab	4.0.11	4.0.11		4.0.11	4.0.11	4.0.11
jupyterlab-variableinspector	3.1.0	3.1.0		3.1.0	3.1.0	3.1.0
jupyterlab_pygments	0.1.2	0.1.2	0.2.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.25.1	2.25.1		2.25.1	2.25.1	2.25.1
jupyterlab_widgets	3.0.9	3.0.9		3.0.9	3.0.9	3.0.9
jxrlib	1.1	1.1	1.1	1.1	1.1	
keyring	23.13.1	23.13.1		23.13.1	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.3	0.3	0.3	0.3	0.3	0.3
lcms2	2.12	2.12	2.12	2.12	2.12	2.12
ld64				530	530	
ld64_osx-64					530	
ld64_osx-arm64				530		
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
ldid				2.1.5	2.1.5	
lerc	3.0	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libavif	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0		1.82.0	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6		14.0.6	14.0.6	14.0.6
libclang13	14.0.6	14.0.6		14.0.6	14.0.6	14.0.6
libcups	2.4.2	2.4.2				
libcurl	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0
libcxx				14.0.6	14.0.6	
libdeflate	1.17	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libevent	2.1.12	2.1.12		2.1.12	2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libgfortran				5.0.0	5.0.0	
libgfortran-ng	11.2.0	11.2.0	11.2.0			
libgfortran5	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0	
libglib	2.78.4	2.78.4		2.78.4	2.78.4	
libgomp	11.2.0	11.2.0	11.2.0			
libiconv	1.16	1.16		1.16	1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6		14.0.6	14.0.6	
libmamba	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
libmambapy	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21	
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.17	12.17		12.17	12.17	12.17
libprotobuf	3.20.3	3.20.3		3.20.3	3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3		1.9.3	1.9.3	1.9.3
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libthrift	0.15.0	0.15.0		0.15.0	0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5			
libwebp-base	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15				
libxkbcommon	1.0.1	1.0.1				
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37		1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0		2.0.0	2.0.0	2.0.0
llvm-openmp				14.0.6	14.0.6	
llvmlite	0.42.0	0.42.0		0.42.0	0.42.0	0.42.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.3	4.9.3		4.9.3	4.9.3	4.9.3
lz4	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10	2.10	2.10
m2-msys2-runtime						2.5.0.17
m2-patch						2.7.5
m2w64-libwinpthread-git						5.0.0.46
markdown	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0		2.2.0	2.2.0	2.2.0
markupsafe	2.1.3	2.1.3	2.1.3	2.1.3	2.1.3	2.1.3
matplotlib	3.8.0	3.8.0	3.8.0	3.8.0	3.8.0	3.8.0
matplotlib-base	3.8.0	3.8.0	3.8.0	3.8.0	3.8.0	3.8.0
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0		0.3.0	0.3.0	0.3.0
mdurl	0.1.0	0.1.0		0.1.0	0.1.0	0.1.0
menuinst	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
mistune	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
mkl	2023.1.0					2023.1.0
mkl-service	2.4.0					2.4.0
mkl_fft	1.3.8					1.3.8
mkl_random	1.2.4					1.2.4
mock			4.0.3			
more-itertools	10.1.0	10.1.0	10.1.0	10.1.0	10.1.0	10.1.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
mpir						3.0.0
mpmath	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch						2016041
multidict	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0		0.6.0	0.6.0	0.6.0
munkres	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4
mypy	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
mypy_extensions	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24		5.7.24	5.7.24	
navigator-updater	0.4.0	0.4.0		0.4.0	0.4.0	0.4.0
nbclassic			1.0.0			
nbclient	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0	7.10.0	7.10.0	7.10.0	7.10.0
nbformat	5.9.2	5.9.2	5.9.2	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4	6.4	6.4	
nest-asyncio	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
networkx	3.1	3.1	3.1	3.1	3.1	3.1
nltk	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1
notebook	7.0.8	7.0.8	6.5.4	7.0.8	7.0.8	7.0.8
notebook-shim	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
nspr	4.35	4.35				
nss	3.89.1	3.89.1				
numba	0.59.0	0.59.0		0.59.0	0.59.0	0.59.0
numexpr	2.8.7	2.8.7	2.8.7	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4	1.26.4
numpydoc	1.5.0	1.5.0		1.5.0	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
openssl	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13
orc	1.7.4	1.7.4		1.7.4	1.7.4	1.7.4
overrides	7.4.0	7.4.0		7.4.0	7.4.0	7.4.0
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pandas	2.1.4	2.1.4	2.1.4	2.1.4	2.1.4	2.1.4
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.3.8	1.3.8	0.12.6	1.3.8	1.3.8	1.3.8
param	2.0.2	2.0.2	1.13.0	2.0.2	2.0.2	2.0.2
paramiko						2.8.1
parsel	1.8.1	1.8.1		1.8.1	1.8.1	1.8.1

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6	
patchelf	0.17.2	0.17.2	0.17.2			
pathlib	1.0.1	1.0.1		1.0.1	1.0.1	1.0.1
pathspec	0.10.3	0.10.3	0.10.3	0.10.3	0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5		0.7.5	0.7.5	0.7.5
pillow	10.2.0	10.2.0	10.2.0	10.2.0	10.2.0	10.2.0
pip	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1
pkce	1.0.3	1.0.3		1.0.3	1.0.3	1.0.3
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
plotly	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		3.11	3.11	3.11
powershell_shortcut						0.0.1
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16		0.1.16	0.1.16	0.1.16
protobuf	3.20.3	3.20.3		3.20.3	3.20.3	3.20.3
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0		9.0.0	9.0.0	9.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2		14.0.2	14.0.2	14.0.2
pyasn1	0.4.8	0.4.8		0.4.8	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8		0.2.8	0.2.8	0.2.8
pybind11-abi	4	4	4	4	4	4
pycodestyle	2.10.0	2.10.0	2.11.1	2.10.0	2.10.0	2.10.0
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydantic	1.10.12	1.10.12		1.10.12	1.10.12	1.10.12
pydeck	0.8.0	0.8.0		0.8.0	0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5		2.0.5	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0		6.3.0	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.1.0	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0		2.4.0	2.4.0	2.4.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0		2.3.0	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0		0.4.0	0.4.0	0.4.0
pynacl						1.5.0

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
pyobjc-core				9.0	9.0	
pyobjc-framework-cocoa				9.0	9.0	
pyobjc-framework-coreservices				9.0	9.0	
pyobjc-framework-fsevents				9.0	9.0	
pyodbc	5.0.1	5.0.1	5.0.1	5.0.1	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0		24.0.0	24.0.0	24.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.10	5.15.10		5.15.10	5.15.10	5.15.10
pyqt5-sip	12.13.0	12.13.0		12.13.0	12.13.0	12.13.0
pyqtwebengine	5.15.10	5.15.10		5.15.10	5.15.10	5.15.10
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.9.2	3.9.2	3.7.0	3.9.2	3.9.2	3.9.2
pytest	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0
python	3.11.7	3.11.7	3.11.7	3.11.7	3.11.7	3.11.7
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0		0.21.0	0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7		2.0.7	2.0.7	2.0.7
python-libarchive-c	2.9	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1		1.2.1	1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0		1.0.0	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2		1.7.2	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2		5.0.2	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3	2023.3	2023.3	2023.3
python.app				3	3	
pytoolconfig	1.2.6	1.2.6		1.2.6	1.2.6	1.2.6
pytz	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.p
pyviz_comms	3.0.0	3.0.0	2.3.0	3.0.0	3.0.0	3.0.0
pywavelets	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pywin32						305
pywin32-ctypes						0.2.0
pywinpty						2.0.10
pyxdg	0.27	0.27				
pyyaml	6.0.1	6.0.1	6.0.1	6.0.1	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2	23.2.0	25.1.2	25.1.2	25.1.2
qdarkstyle	3.0.2	3.0.2		3.0.2	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2		0.2.2	0.2.2	0.2.2
qt-main	5.15.2	5.15.2		5.15.2	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9		5.15.9	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2		1.2.2	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2		5.4.2	5.4.2	5.4.2
qtpy	2.4.1	2.4.1		2.4.1	2.4.1	2.4.1
queuelib	1.6.2	1.6.2		1.6.2	1.6.2	1.6.2
re2	2022.04.01	2022.04.01		2022.04.01	2022.04.01	2022.04.
readline	8.2	8.2	8.2	8.2	8.2	
referencing	0.30.2	0.30.2	0.30.2	0.30.2	0.30.2	0.30.2
regex	2023.10.3	2023.10.3	2023.10.3	2023.10.3	2023.10.3	2023.10.
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1		1.5.1	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4		0.1.4	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1		0.1.1	0.1.1	0.1.1
rich	13.3.5	13.3.5		13.3.5	13.3.5	13.3.5
rope	1.7.0	1.7.0		1.7.0	1.7.0	1.7.0
rpds-py	0.10.6	0.10.6	0.10.6	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1		1.0.1	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
s2n	1.3.27	1.3.27				
s3fs	2023.10.0	2023.10.0	2023.10.0	2023.10.0	2023.10.0	2023.10.
scikit-image	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0
scikit-learn	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
scipy	1.11.4	1.11.4	1.11.4	1.11.4	1.11.4	1.11.4
scrapy	2.8.0	2.8.0		2.8.0	2.8.0	2.8.0
seaborn	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1				
semver	2.13.0	2.13.0		2.13.0	2.13.0	2.13.0
send2trash	1.8.2	1.8.2	1.8.2	1.8.2	1.8.2	1.8.2
service_identity	18.1.0	18.1.0		18.1.0	18.1.0	18.1.0
setuptools	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2
sip	6.7.12	6.7.12		6.7.12	6.7.12	6.7.12
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1		5.2.1	5.2.1	5.2.1
smmap	4.0.0	4.0.0		4.0.0	4.0.0	4.0.0
snappy	1.1.10	1.1.10	1.1.10	1.1.10	1.1.10	1.1.10
sniffio	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5	2.5	2.5	2.5
sphinx	5.0.2	5.0.2		5.0.2	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2		1.0.2	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2		1.0.2	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0		2.0.0	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1		1.0.1	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3		1.0.3	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5		1.1.5	1.1.5	1.1.5
spyder	5.4.3	5.4.3		5.4.3	5.4.3	5.4.3
spyder-kernels	2.4.4	2.4.4		2.4.4	2.4.4	2.4.4
sqlalchemy	2.0.25	2.0.25	2.0.25	2.0.25	2.0.25	2.0.25
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0
streamlit	1.30.0	1.30.0		1.30.0	1.30.0	1.30.0
sympy	1.12	1.12	1.12	1.12	1.12	1.12
tabulate	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
tapi				1100.0.11	1000.10.8	

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
tbb	2021.8.0	2021.8.0		2021.8.0	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3		1.3	1.3	1.3
textdistance	4.2.1	4.2.1		4.2.1	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		0.1.1	0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4.1
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0		3.2.0	3.2.0	3.2.0
toml	0.10.2	0.10.2		0.10.2	0.10.2	0.10.2
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.3.3	6.3.3	6.3.3	6.3.3	6.3.3	6.3.3
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
twisted	23.10.0	23.10.0		23.10.0	23.10.0	23.10.0
twisted-iocpsupport						1.0.2
typing-extensions	4.9.0	4.9.0	4.9.0	4.9.0	4.9.0	4.9.0
typing_extensions	4.9.0	4.9.0	4.9.0	4.9.0	4.9.0	4.9.0
tzdata	2023d	2023d	2023d	2023d	2023d	2023d
tzlocal	2.1	2.1		2.1	2.1	2.1
uc-micro-py	1.0.1	1.0.1		1.0.1	1.0.1	1.0.1
ujson	5.4.0	5.4.0		5.4.0	5.4.0	5.4.0
unidecode	1.2.0	1.2.0		1.2.0	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11	
urllib3	2.0.7	2.0.7	2.0.7	2.0.7	2.0.7	2.0.7
utf8proc	2.6.1	2.6.1		2.6.1	2.6.1	2.6.1
validators	0.18.2	0.18.2		0.18.2	0.18.2	0.18.2
vc						14.2
vs2015_runtime						14.27.29
w3lib	2.1.2	2.1.2		2.1.2	2.1.2	2.1.2
watchdog	2.1.6	2.1.6		2.1.6	2.1.6	2.1.6
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.3.8	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2		1.0.2	1.0.2	1.0.2
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
widgetsnbextension	3.5.2	3.5.2		3.5.2	3.5.2	3.5.2
win_inet_pton						1.1.0
winpty						0.4.3
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		3.0.2	3.0.2	
xarray	2023.6.0	2023.6.0		2023.6.0	2023.6.0	2023.6.0
xlwings				0.29.1	0.29.1	0.29.1
xyzservices	2022.9.0	2022.9.0		2022.9.0	2022.9.0	2022.9.0

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Table 9 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
xz	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
yapf	0.31.0	0.31.0		0.31.0	0.31.0	0.31.0
yarl	1.9.3	1.9.3	1.9.3	1.9.3	1.9.3	1.9.3
zeromq	4.3.5	4.3.5	4.3.5	4.3.5	4.3.5	4.3.5
zfp	1.0.0			1.0.0	1.0.0	1.0.0
zict	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0	3.17.0	3.17.0	3.17.0	3.17.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7		2.0.7	2.0.7	2.0.7
zope	1.0	1.0		1.0	1.0	1.0
zope.interface	5.4.0	5.4.0		5.4.0	5.4.0	5.4.0
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_anaconda_depends	2024.02	2024.02	2024.02
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	
aiobotocore	2.7.0	2.7.0	2.7.0
aiohttp	3.9.3	3.9.3	3.9.3
aioitertools	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0
alabaster	0.7.12	0.7.12	
altair	5.0.1	5.0.1	
anaconda-anon-usage	0.4.3	0.4.3	0.4.3
anaconda-catalogs	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3	1.12.3
anaconda-cloud-auth	0.1.4	0.1.4	
anaconda-navigator	2.5.2	2.5.2	
anaconda-project	0.11.1	0.11.1	0.11.1
anyio	4.2.0	4.2.0	3.5.0
aom	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4
archspec	0.2.1	0.2.1	0.2.1
argon2-cffi	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3	
arrow-cpp	14.0.2	14.0.2	
astroid	2.14.2	2.14.2	2.14.2
astropy	5.3.4	5.3.4	5.3.4
asttokens	2.0.5	2.0.5	2.0.5
async-lru	2.0.4	2.0.4	
atomicwrites	1.4.0	1.4.0	

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Table 10 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
attrs	23.1.0	23.1.0	23.1.0
automat	20.2.0	20.2.0	
autopep8	1.6.0	1.6.0	
aws-c-auth	0.6.19	0.6.19	
aws-c-cal	0.5.20	0.5.20	
aws-c-common	0.8.5	0.8.5	
aws-c-compression	0.2.16	0.2.16	
aws-c-event-stream	0.2.15	0.2.15	
aws-c-http	0.6.25	0.6.25	
aws-c-io	0.13.10	0.13.10	
aws-c-mqtt	0.7.13	0.7.13	
aws-c-s3	0.1.51	0.1.51	
aws-c-sdkutils	0.1.6	0.1.6	
aws-checksums	0.1.13	0.1.13	
aws-crt-cpp	0.18.16	0.18.16	
aws-sdk-cpp	1.10.55	1.10.55	
babel	2.11.0	2.11.0	
backports	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0	
beautifulsoup4	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4	
black	23.11.0	23.11.0	23.11.0
blas	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0
blinker	1.6.2	1.6.2	
blosc	1.21.3	1.21.3	1.21.3
bokeh	3.3.4	3.3.4	2.4.3
boltons	23.0.0	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0	
botocore	1.31.64	1.31.64	1.31.64
bottleneck	1.3.7	1.3.7	1.3.7
brotli	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9	1.0.9
brunsli	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0	
ca-certificates	2023.12.12	2023.12.12	2023.12.12
cachetools	4.2.2	4.2.2	
certifi	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0
cfitsio	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4
click	8.1.7	8.1.7	8.1.7

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Table 10 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
cloudpickle	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	
colorama	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2
conda	24.1.2	24.1.2	24.1.2
conda-build	24.1.2	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-index	0.4.0	0.4.0	0.4.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0
conda-pack	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75	
conda-token	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2
constantly	23.10.4	23.10.4	
contourpy	1.2.0	1.2.0	1.2.0
cookiecutter	2.5.0	2.5.0	
cryptography	42.0.2	42.0.2	42.0.2
cssselect	1.2.0	1.2.0	
curl	8.5.0	8.5.0	8.5.0
cycler	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28	
cytoolz	0.12.2	0.12.2	0.12.2
dask	2023.11.0	2023.11.0	2023.11.0
dask-core	2023.11.0	2023.11.0	2023.11.0
datashader	0.16.0	0.16.0	
dav1d	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18	
debugpy	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713	
dill	0.3.7	0.3.7	0.3.7
distributed	2023.11.0	2023.11.0	2023.11.0
distro	1.8.0	1.8.0	1.8.0
docstring-to-markdown	0.11	0.11	
docutils	0.18.1	0.18.1	
entrypoints	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3
expat	2.5.0	2.5.0	
filelock	3.13.1	3.13.1	3.13.1
flake8	6.0.0	6.0.0	
flask	2.2.5	2.2.5	2.2.5
fmt	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1	
fonttools	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1

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Package Name	linux-64	linux-aarch64	linux-s390x
frozenlist	1.4.0	1.4.0	1.4.0
fsspec	2023.10.0	2023.10.0	2023.10.0
future	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	
gflags	2.2.2	2.2.2	
giflib	5.2.1	5.2.1	5.2.1
gitdb	4.0.7	4.0.7	
gitpython	3.1.37	3.1.37	
glib	2.78.4	2.78.4	
glib-tools	2.78.4	2.78.4	
glog	0.5.0	0.5.0	
gmp	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2
greenlet	3.0.1	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2	
gst-plugins-base	1.14.1	1.14.1	
gstreamer	1.14.1	1.14.1	
h5py	3.9.0	3.9.0	3.7.0
hdf5	1.12.1	1.12.1	1.10.6
heapdict	1.0.1	1.0.1	1.0.1
holoviews	1.18.3	1.18.3	1.14.8
hvplot	0.9.2	0.9.2	0.7.3
hyperlink	21.0.0	21.0.0	
icu	73.1	73.1	73.1
idna	3.4	3.4	3.3
imagecodecs	2023.1.23	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1	2.33.1
imagesize	1.4.1	1.4.1	
imbalanced-learn	0.11.0	0.11.0	0.11.0
importlib-metadata	7.0.1	7.0.1	7.0.1
importlib_metadata	7.0.1	7.0.1	
incremental	22.10.0	22.10.0	
inflection	0.5.1	0.5.1	
iniconfig	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0		
intervaltree	3.1.0	3.1.0	
ipykernel	6.28.0	6.28.0	6.25.0
ipython	8.20.0	8.20.0	8.20.0
ipython_genutils	0.2.0	0.2.0	0.2.0
ipywidgets	7.6.5	7.6.5	
isort	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	
itemloaders	1.1.0	1.1.0	
itsdangerous	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1	
jedi	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1	
jellyfish	1.0.1	1.0.1	
jinja2	3.1.3	3.1.3	3.1.3

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Package Name	linux-64	linux-aarch64	linux-s390x
jmespath	1.0.1	1.0.1	1.0.1
joblib	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e
jq	1.6	1.6	
json5	0.9.6	0.9.6	
jsonpatch	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1
jsonschema	4.19.2	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0	
jupyter_client	8.6.0	8.6.0	7.4.9
jupyter_console	6.6.3	6.6.3	6.6.3
jupyter_core	5.5.0	5.5.0	5.5.0
jupyter_events	0.8.0	0.8.0	
jupyter_server	2.10.0	2.10.0	1.23.4
jupyter_server_terminals	0.4.4	0.4.4	
jupyterlab	4.0.11	4.0.11	
jupyterlab-variableinspector	3.1.0	3.1.0	
jupyterlab_pygments	0.1.2	0.1.2	0.2.2
jupyterlab_server	2.25.1	2.25.1	
jupyterlab_widgets	3.0.9	3.0.9	
jxrlib	1.1	1.1	1.1
keyring	23.13.1	23.13.1	
kiwisolver	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0
lazy_loader	0.3	0.3	0.3
lcms2	2.12	2.12	2.12
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
lerc	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2
libavif	0.11.1	0.11.1	0.11.1
libboost	1.82.0	1.82.0	
libbrotlicommon	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6	
libclang13	14.0.6	14.0.6	
libcups	2.4.2	2.4.2	
libcurl	8.5.0	8.5.0	8.5.0
libdeflate	1.17	1.17	1.17
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libevent	2.1.12	2.1.12	
libffi	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0

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Package Name	linux-64	linux-aarch64	linux-s390x
libgfortran-ng	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0
libglib	2.78.4	2.78.4	
libgomp	11.2.0	11.2.0	11.2.0
libiconv	1.16	1.16	
liblief	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6	
libmamba	1.5.6	1.5.6	1.5.6
libmambapy	1.5.6	1.5.6	1.5.6
libnghttp2	1.57.0	1.57.0	1.57.0
libopenblas		0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39
libpq	12.17	12.17	
libprotobuf	3.20.3	3.20.3	
libsodium	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3	
libssh2	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	
libtiff	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5
libwebp-base	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15	
libxkbcommon	1.0.1	1.0.1	
libxml2	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37	
libzopfli	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0	
llvmlite	0.42.0	0.42.0	
locket	1.0.0	1.0.0	1.0.0
lxml	4.9.3	4.9.3	
lz4	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10
markdown	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0	
markupsafe	2.1.3	2.1.3	2.1.3
matplotlib	3.8.0	3.8.0	3.8.0
matplotlib-base	3.8.0	3.8.0	3.8.0
matplotlib-inline	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0	
mdurl	0.1.0	0.1.0	
menuinst	2.0.2	2.0.2	2.0.2
mistune	2.0.4	2.0.4	2.0.4
mkl	2023.1.0		
mkl-service	2.4.0		
mkl_fft	1.3.8		
mkl_random	1.2.4		

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Package Name	linux-64	linux-aarch64	linux-s390x
mock			4.0.3
more-itertools	10.1.0	10.1.0	10.1.0
mpc	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2
mpmath	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3
multidict	6.0.4	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0	
munkres	1.1.4	1.1.4	1.1.4
mypy	1.8.0	1.8.0	1.8.0
mypy_extensions	1.0.0	1.0.0	1.0.0
mysql	5.7.24	5.7.24	
navigator-updater	0.4.0	0.4.0	
nbclassic			1.0.0
nbclient	0.8.0	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0	7.10.0
nbformat	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4
nest-asyncio	1.6.0	1.6.0	1.6.0
networkx	3.1	3.1	3.1
nltk	3.8.1	3.8.1	3.8.1
notebook	7.0.8	7.0.8	6.5.4
notebook-shim	0.2.3	0.2.3	0.2.3
nspr	4.35	4.35	
nss	3.89.1	3.89.1	
numba	0.59.0	0.59.0	
numexpr	2.8.7	2.8.7	2.8.7
numpy	1.26.4	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4	1.26.4
numpydoc	1.5.0	1.5.0	
oniguruma	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10
openssl	3.0.13	3.0.13	3.0.13
orc	1.7.4	1.7.4	
overrides	7.4.0	7.4.0	
packaging	23.1	23.1	23.1
pandas	2.1.4	2.1.4	2.1.4
pandocfilters	1.5.0	1.5.0	1.5.0
panel	1.3.8	1.3.8	0.12.6
param	2.0.2	2.0.2	1.13.0
parsel	1.8.1	1.8.1	
parso	0.8.3	0.8.3	0.8.3
partd	1.4.1	1.4.1	1.4.1
patch	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2
pathlib	1.0.1	1.0.1	
pathspec	0.10.3	0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3
pcre2	10.42	10.42	10.42

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Package Name	linux-64	linux-aarch64	linux-s390x
pexpect	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	
pillow	10.2.0	10.2.0	10.2.0
pip	23.3.1	23.3.1	23.3.1
pkce	1.0.3	1.0.3	
pkginfo	1.9.6	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0	3.10.0
plotly	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0
ply	3.11	3.11	
prometheus_client	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43	3.0.43
protego	0.1.16	0.1.16	
protobuf	3.20.3	3.20.3	
psutil	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0	
py-lief	0.12.3	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2	
pyasn1	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	
pybind11-abi	4	4	4
pycodestyle	2.10.0	2.10.0	2.11.1
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2
pydantic	1.10.12	1.10.12	
pydeck	0.8.0	0.8.0	
pydispatcher	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0	
pyerfa	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.1.0
pygments	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0	
pylint	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0	
pyls-spyder	0.4.0	0.4.0	
pyodbc	5.0.1	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0	
pyparsing	3.0.9	3.0.9	3.0.9
pyqt	5.15.10	5.15.10	
pyqt5-sip	12.13.0	12.13.0	
pyqtwebengine	5.15.10	5.15.10	
pysocks	1.7.1	1.7.1	1.7.1
pytables	3.9.2	3.9.2	3.7.0
pytest	7.4.0	7.4.0	7.4.0
python	3.11.7	3.11.7	3.11.7

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Package Name	linux-64	linux-aarch64	linux-s390x
python-dateutil	2.8.2	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0	
python-fastjsonschema	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	
python-libarchive-c	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1	
python-lsp-jsonrpc	1.0.0	1.0.0	
python-lsp-server	1.7.2	1.7.2	
python-slugify	5.0.2	5.0.2	
python-snappy	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3
pytoolconfig	1.2.6	1.2.6	
pytz	2023.3.post1	2023.3.post1	2023.3.post1
pyviz_comms	3.0.0	3.0.0	2.3.0
pywavelets	1.5.0	1.5.0	1.5.0
pyxdg	0.27	0.27	
pyyaml	6.0.1	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2	23.2.0
qdarkstyle	3.0.2	3.0.2	
qstylizer	0.2.2	0.2.2	
qt-main	5.15.2	5.15.2	
qt-webengine	5.15.9	5.15.9	
qtawesome	1.2.2	1.2.2	
qtconsole	5.4.2	5.4.2	
qtpy	2.4.1	2.4.1	
queuelib	1.6.2	1.6.2	
re2	2022.04.01	2022.04.01	
readline	8.2	8.2	8.2
referencing	0.30.2	0.30.2	0.30.2
regex	2023.10.3	2023.10.3	2023.10.3
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1	
requests-toolbelt	1.0.0	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	
rich	13.3.5	13.3.5	
rope	1.7.0	1.7.0	
rpds-py	0.10.6	0.10.6	0.10.6
rtree	1.0.1	1.0.1	
ruamel.yaml	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21
s2n	1.3.27	1.3.27	
s3fs	2023.10.0	2023.10.0	2023.10.0
scikit-image	0.22.0	0.22.0	0.22.0
scikit-learn	1.2.2	1.2.2	1.2.2
scipy	1.11.4	1.11.4	1.11.4
scrapy	2.8.0	2.8.0	

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Package Name	linux-64	linux-aarch64	linux-s390x
seaborn	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1	
semver	2.13.0	2.13.0	
send2trash	1.8.2	1.8.2	1.8.2
service_identity	18.1.0	18.1.0	
setuptools	68.2.2	68.2.2	68.2.2
sip	6.7.12	6.7.12	
six	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	
smmap	4.0.0	4.0.0	
snappy	1.1.10	1.1.10	1.1.10
sniffio	1.3.0	1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0
soupsieve	2.5	2.5	2.5
sphinx	5.0.2	5.0.2	
sphinxcontrib-applehelp	1.0.2	1.0.2	
sphinxcontrib-devhelp	1.0.2	1.0.2	
sphinxcontrib-htmlhelp	2.0.0	2.0.0	
sphinxcontrib-jsmath	1.0.1	1.0.1	
sphinxcontrib-qthelp	1.0.3	1.0.3	
sphinxcontrib-serializinghtml	1.1.5	1.1.5	
spyder	5.4.3	5.4.3	
spyder-kernels	2.4.4	2.4.4	
sqlalchemy	2.0.25	2.0.25	2.0.25
sqlite	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0	0.14.0
streamlit	1.30.0	1.30.0	
sympy	1.12	1.12	1.12
tabulate	0.9.0	0.9.0	0.9.0
tbb	2021.8.0	2021.8.0	
tblib	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3	
textdistance	4.2.1	4.2.1	
threadpoolctl	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1	
tifffile	2023.4.12	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	
toml	0.10.2	0.10.2	
tomlkit	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0
tornado	6.3.3	6.3.3	6.3.3
tqdm	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1
truststore	0.8.0	0.8.0	0.8.0

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Package Name	linux-64	linux-aarch64	linux-s390x
twisted	23.10.0	23.10.0	
typing-extensions	4.9.0	4.9.0	4.9.0
typing_extensions	4.9.0	4.9.0	4.9.0
tzdata	2023d	2023d	2023d
tzlocal	2.1	2.1	
uc-micro-py	1.0.1	1.0.1	
ujson	5.4.0	5.4.0	
unidecode	1.2.0	1.2.0	
unixodbc	2.3.11	2.3.11	2.3.11
urllib3	2.0.7	2.0.7	2.0.7
utf8proc	2.6.1	2.6.1	
validators	0.18.2	0.18.2	
w3lib	2.1.2	2.1.2	
watchdog	2.1.6	2.1.6	
wcwidth	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.3.8
whatthepatch	1.0.2	1.0.2	
wheel	0.41.2	0.41.2	0.41.2
widgetsnbextension	3.5.2	3.5.2	
wrapt	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2	
xarray	2023.6.0	2023.6.0	
xyzservices	2022.9.0	2022.9.0	
xz	5.4.5	5.4.5	5.4.5
yaml	0.2.5	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0	0.8.0
yapf	0.31.0	0.31.0	
yarl	1.9.3	1.9.3	1.9.3
zeromq	4.3.5	4.3.5	4.3.5
zfp	1.0.0		
zict	3.0.0	3.0.0	3.0.0
zipp	3.17.0	3.17.0	3.17.0
zlib	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	
zope	1.0	1.0	
zope.interface	5.4.0	5.4.0	
zstandard	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2024.02	2024.02
abseil-cpp	20230802.0	20230802.0
aiobotocore	2.7.0	2.7.0
aiohttp	3.9.3	3.9.3
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
alabaster	0.7.12	0.7.12
altair	5.0.1	5.0.1
anaconda-anon-usage	0.4.3	0.4.3
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.12.3	1.12.3
anaconda-cloud-auth	0.1.4	0.1.4
anaconda-navigator	2.5.2	2.5.2
anaconda-project	0.11.1	0.11.1
anyio	4.2.0	4.2.0
aom	3.6.0	3.6.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.2	0.1.2
appscript	1.1.2	1.1.2
archspec	0.2.1	0.2.1
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	14.0.2	14.0.2
astroid	2.14.2	2.14.2
astropy	5.3.4	5.3.4
asttokens	2.0.5	2.0.5
async-lru	2.0.4	2.0.4
atomicwrites	1.4.0	1.4.0
attrs	23.1.0	23.1.0
automat	20.2.0	20.2.0
autopep8	1.6.0	1.6.0
aws-c-auth	0.6.19	0.6.19
aws-c-cal	0.5.20	0.5.20
aws-c-common	0.8.5	0.8.5
aws-c-compression	0.2.16	0.2.16
aws-c-event-stream	0.2.15	0.2.15
aws-c-http	0.6.25	0.6.25
aws-c-io	0.13.10	0.13.10
aws-c-mqtt	0.7.13	0.7.13
aws-c-s3	0.1.51	0.1.51
aws-c-sdkutils	0.1.6	0.1.6
aws-checksums	0.1.13	0.1.13
aws-crt-cpp	0.18.16	0.18.16
aws-sdk-cpp	1.10.55	1.10.55
babel	2.11.0	2.11.0
backports	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4

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Package Name	osx-arm64	osx-64
backports.tempfile	1.0	1.0
backports.weakref	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4
black	23.11.0	23.11.0
blas	1.0	1.0
bleach	4.1.0	4.1.0
blinker	1.6.2	1.6.2
blosc	1.21.3	1.21.3
bokeh	3.3.4	3.3.4
boltons	23.0.0	23.0.0
boost-cpp	1.82.0	1.82.0
botocore	1.31.64	1.31.64
bottleneck	1.3.7	1.3.7
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotli-python	1.0.9	1.0.9
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
c-blosc2	2.12.0	2.12.0
ca-certificates	2023.12.12	2023.12.12
cachetools	4.2.2	4.2.2
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.1.7	8.1.7
cloudpickle	2.2.1	2.2.1
clyent	1.2.2	1.2.2
colorama	0.4.6	0.4.6
colorcet	3.0.1	3.0.1
comm	0.1.2	0.1.2
conda	24.1.2	24.1.2
conda-build	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0
conda-index	0.4.0	0.4.0
conda-libmamba-solver	24.1.0	24.1.0
conda-pack	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75
conda-token	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2

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Package Name	osx-arm64	osx-64
constantly	23.10.4	23.10.4
contourpy	1.2.0	1.2.0
cookiecutter	2.5.0	2.5.0
cryptography	42.0.2	42.0.2
cssselect	1.2.0	1.2.0
curl	8.5.0	8.5.0
cycler	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28
cytoolz	0.12.2	0.12.2
dask	2023.11.0	2023.11.0
dask-core	2023.11.0	2023.11.0
datashader	0.16.0	0.16.0
dav1d	1.2.1	1.2.1
debugpy	1.6.7	1.6.7
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.7	0.3.7
distributed	2023.11.0	2023.11.0
distro	1.8.0	1.8.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
filelock	3.13.1	3.13.1
flake8	6.0.0	6.0.0
flask	2.2.5	2.2.5
fmt	9.1.0	9.1.0
fonttools	4.25.0	4.25.0
freetype	2.12.1	2.12.1
frozenlist	1.4.0	1.4.0
fsspec	2023.10.0	2023.10.0
future	0.18.3	0.18.3
gensim	4.3.0	4.3.0
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
gitdb	4.0.7	4.0.7
gitpython	3.1.37	3.1.37
glib	2.78.4	2.78.4
glib-tools	2.78.4	2.78.4
glog	0.5.0	0.5.0
gmp	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2
greenlet	3.0.1	3.0.1
grpc-cpp	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
gtest	1.14.0	1.14.0

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Package Name	osx-arm64	osx-64
h5py	3.9.0	3.9.0
hdf5	1.12.1	1.12.1
heapdict	1.0.1	1.0.1
holoviews	1.18.3	1.18.3
hvplot	0.9.2	0.9.2
hyperlink	21.0.0	21.0.0
icu	73.1	73.1
idna	3.4	3.4
imagecodecs	2023.1.23	2023.1.23
imageio	2.33.1	2.33.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.11.0	0.11.0
importlib-metadata	7.0.1	7.0.1
importlib_metadata	7.0.1	7.0.1
incremental	22.10.0	22.10.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.6.8	0.6.8
intervaltree	3.1.0	3.1.0
ipykernel	6.28.0	6.28.0
ipython	8.20.0	8.20.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	7.6.5	7.6.5
isort	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0
itemloaders	1.1.0	1.1.0
itsdangerous	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	1.0.1	1.0.1
jinja2	3.1.3	3.1.3
jmespath	1.0.1	1.0.1
joblib	1.2.0	1.2.0
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
jsonschema	4.19.2	4.19.2
jsonschema-specifications	2023.7.1	2023.7.1
jupyter	1.0.0	1.0.0
jupyter-lsp	2.2.0	2.2.0
jupyter_client	8.6.0	8.6.0
jupyter_console	6.6.3	6.6.3
jupyter_core	5.5.0	5.5.0
jupyter_events	0.8.0	0.8.0
jupyter_server	2.10.0	2.10.0
jupyter_server_terminals	0.4.4	0.4.4
jupyterlab	4.0.11	4.0.11
jupyterlab-variableinspector	3.1.0	3.1.0

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Package Name	osx-arm64	osx-64
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.25.1	2.25.1
jupyterlab_widgets	3.0.9	3.0.9
jxrlib	1.1	1.1
keyring	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4
krb5	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0
lazy_loader	0.3	0.3
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libavif	0.11.1	0.11.1
libboost	1.82.0	1.82.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.5.0	8.5.0
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libglib	2.78.4	2.78.4
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.5.6	1.5.6
libmambapy	1.5.6	1.5.6
libnghttp2	1.57.0	1.57.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.17	12.17
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3
libssh2	1.10.0	1.10.0
libthrift	0.15.0	0.15.0
libtiff	4.5.1	4.5.1

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Package Name	osx-arm64	osx-64
libwebp-base	1.3.2	1.3.2
libxml2	2.10.4	2.10.4
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.42.0	0.42.0
locket	1.0.0	1.0.0
lxml	4.9.3	4.9.3
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.3	2.1.3
matplotlib	3.8.0	3.8.0
matplotlib-base	3.8.0	3.8.0
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
menuinst	2.0.2	2.0.2
mistune	2.0.4	2.0.4
more-itertools	10.1.0	10.1.0
mpc	1.1.0	1.1.0
mpfr	4.0.2	4.0.2
mpmath	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3
multidict	6.0.4	6.0.4
multipledispatch	0.6.0	0.6.0
munkres	1.1.4	1.1.4
mypy	1.8.0	1.8.0
mypy_extensions	1.0.0	1.0.0
mysql	5.7.24	5.7.24
navigator-updater	0.4.0	0.4.0
nbclient	0.8.0	0.8.0
nbconvert	7.10.0	7.10.0
nbformat	5.9.2	5.9.2
ncurses	6.4	6.4
nest-asyncio	1.6.0	1.6.0
networkx	3.1	3.1
nltk	3.8.1	3.8.1
notebook	7.0.8	7.0.8
notebook-shim	0.2.3	0.2.3
numba	0.59.0	0.59.0
numexpr	2.8.7	2.8.7
numpy	1.26.4	1.26.4
numpy-base	1.26.4	1.26.4
numpydoc	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1

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Package Name	osx-arm64	osx-64
openjpeg	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10
openssl	3.0.13	3.0.13
orc	1.7.4	1.7.4
overrides	7.4.0	7.4.0
packaging	23.1	23.1
pandas	2.1.4	2.1.4
pandocfilters	1.5.0	1.5.0
panel	1.3.8	1.3.8
param	2.0.2	2.0.2
parsel	1.8.1	1.8.1
parso	0.8.3	0.8.3
partd	1.4.1	1.4.1
patch	2.7.6	2.7.6
pathlib	1.0.1	1.0.1
pathspec	0.10.3	0.10.3
patsy	0.5.3	0.5.3
pcre2	10.42	10.42
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	10.2.0	10.2.0
pip	23.3.1	23.3.1
pkce	1.0.3	1.0.3
pkginfo	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0
plotly	5.9.0	5.9.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.43	3.0.43
prompt_toolkit	3.0.43	3.0.43
protego	0.1.16	0.1.16
protobuf	3.20.3	3.20.3
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	9.0.0	9.0.0
py-lief	0.12.3	0.12.3
pyarrow	14.0.2	14.0.2
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	4	4
pycodestyle	2.10.0	2.10.0
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydantic	1.10.12	1.10.12
pydeck	0.8.0	0.8.0
pydispatcher	2.0.5	2.0.5

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Package Name	osx-arm64	osx-64
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1
pygments	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0
pylint	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0
pyobjc-core	9.0	9.0
pyobjc-framework-cocoa	9.0	9.0
pyobjc-framework-coreservices	9.0	9.0
pyobjc-framework-fsevents	9.0	9.0
pyodbc	5.0.1	5.0.1
pyopenssl	24.0.0	24.0.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.10	5.15.10
pyqt5-sip	12.13.0	12.13.0
pyqtwebengine	5.15.10	5.15.10
pysocks	1.7.1	1.7.1
pytables	3.9.2	3.9.2
pytest	7.4.0	7.4.0
python	3.11.7	3.11.7
python-dateutil	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-tzdata	2023.3	2023.3
python.app	3	3
pytoolconfig	1.2.6	1.2.6
pytz	2023.3.post1	2023.3.post1
pyviz_comms	3.0.0	3.0.0
pywavelets	1.5.0	1.5.0
pyyaml	6.0.1	6.0.1
pyzmq	25.1.2	25.1.2
qdarkstyle	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2
qtpy	2.4.1	2.4.1
queuelib	1.6.2	1.6.2
re2	2022.04.01	2022.04.01

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Package Name	osx-arm64	osx-64
readline	8.2	8.2
referencing	0.30.2	0.30.2
regex	2023.10.3	2023.10.3
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
requests-file	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rich	13.3.5	13.3.5
rope	1.7.0	1.7.0
rpds-py	0.10.6	0.10.6
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2023.10.0	2023.10.0
scikit-image	0.22.0	0.22.0
scikit-learn	1.2.2	1.2.2
scipy	1.11.4	1.11.4
scrapy	2.8.0	2.8.0
seaborn	0.12.2	0.12.2
semver	2.13.0	2.13.0
send2trash	1.8.2	1.8.2
service_identity	18.1.0	18.1.0
setuptools	68.2.2	68.2.2
sip	6.7.12	6.7.12
six	1.16.0	1.16.0
smart_open	5.2.1	5.2.1
smmap	4.0.0	4.0.0
snappy	1.1.10	1.1.10
sniffio	1.3.0	1.3.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.5	2.5
sphinx	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5
spyder	5.4.3	5.4.3
spyder-kernels	2.4.4	2.4.4
sqlalchemy	2.0.25	2.0.25
sqlite	3.41.2	3.41.2
stack_data	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0
streamlit	1.30.0	1.30.0
sympy	1.12	1.12

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Table 11 – continued from previous page

Package Name	osx-arm64	osx-64
tabulate	0.9.0	0.9.0
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0
three-merge	0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1
tk	8.6.12	8.6.12
tldextract	3.2.0	3.2.0
toml	0.10.2	0.10.2
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.3.3	6.3.3
tqdm	4.65.0	4.65.0
traitlets	5.7.1	5.7.1
truststore	0.8.0	0.8.0
twisted	23.10.0	23.10.0
typing-extensions	4.9.0	4.9.0
typing_extensions	4.9.0	4.9.0
tzdata	2023d	2023d
tzlocal	2.1	2.1
uc-micro-py	1.0.1	1.0.1
ujson	5.4.0	5.4.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	2.0.7	2.0.7
utf8proc	2.6.1	2.6.1
validators	0.18.2	0.18.2
w3lib	2.1.2	2.1.2
watchdog	2.1.6	2.1.6
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2
wheel	0.41.2	0.41.2
widgetsnbextension	3.5.2	3.5.2
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2023.6.0	2023.6.0
xlwings	0.29.1	0.29.1
xyzservices	2022.9.0	2022.9.0
xz	5.4.5	5.4.5
yaml	0.2.5	0.2.5
yaml-cpp	0.8.0	0.8.0

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Package Name	osx-arm64	osx-64
yapf	0.31.0	0.31.0
yarl	1.9.3	1.9.3
zeromq	4.3.5	4.3.5
zfp	1.0.0	1.0.0
zict	3.0.0	3.0.0
zipp	3.17.0	3.17.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2024.02
abseil-cpp	20211102.0
aiobotocore	2.7.0
aiohttp	3.9.3
aioitertools	0.7.1
aiosignal	1.2.0
alabaster	0.7.12
altair	5.0.1
anaconda-anon-usage	0.4.3
anaconda-catalogs	0.2.0
anaconda-client	1.12.3
anaconda-cloud-auth	0.1.4
anaconda-navigator	2.5.2
anaconda-project	0.11.1
anyio	4.2.0
aom	3.6.0
appdirs	1.4.4
archspec	0.2.1
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	14.0.2
astroid	2.14.2
astropy	5.3.4
asttokens	2.0.5
async-lru	2.0.4
atomicwrites	1.4.0
attrs	23.1.0
automat	20.2.0
autopep8	1.6.0
aws-c-auth	0.6.19
aws-c-cal	0.5.20

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Package Name	win-64
aws-c-common	0.8.5
aws-c-compression	0.2.16
aws-c-event-stream	0.2.15
aws-c-http	0.6.25
aws-c-io	0.13.10
aws-c-mqtt	0.7.13
aws-c-s3	0.1.51
aws-c-sdkutils	0.1.6
aws-checksums	0.1.13
aws-crt-cpp	0.18.16
aws-sdk-cpp	1.10.55
babel	2.11.0
backports	1.1
backports.functools_lru_cache	1.6.4
backports.tempfile	1.0
backports.weakref	1.0.post1
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	23.11.0
blas	1.0
bleach	4.1.0
blinker	1.6.2
blosc	1.21.3
bokeh	3.3.4
boltons	23.0.0
boost-cpp	1.82.0
botocore	1.31.64
bottleneck	1.3.7
brotli	1.0.9
brotli-bin	1.0.9
brotli-python	1.0.9
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.12.0
ca-certificates	2023.12.12
cachetools	4.2.2
certifi	2024.2.2
cffi	1.16.0
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.1.7
cloudpickle	2.2.1
clyent	1.2.2
colorama	0.4.6
colorcet	3.0.1
comm	0.1.2
conda	24.1.2

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Package Name	win-64
conda-build	24.1.2
conda-content-trust	0.2.0
conda-index	0.4.0
conda-libmamba-solver	24.1.0
conda-pack	0.6.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
conda-repo-cli	1.0.75
conda-token	0.4.0
conda-verify	3.4.2
console_shortcut	0.1.1
constantly	23.10.4
contourpy	1.2.0
cookiecutter	2.5.0
cryptography	42.0.2
cssselect	1.2.0
curl	8.5.0
cycler	0.11.0
cytoolz	0.12.2
dask	2023.11.0
dask-core	2023.11.0
datashader	0.16.0
dav1d	1.2.1
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.7
distributed	2023.11.0
distro	1.8.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
filelock	3.13.1
flake8	6.0.0
flask	2.2.5
fmt	9.1.0
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.4.0
fsspec	2023.10.0
future	0.18.3
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
gitdb	4.0.7
gitpython	3.1.37
glog	0.5.0

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Package Name	win-64
gmpy2	2.1.2
greenlet	3.0.1
grpc-cpp	1.48.2
h5py	3.9.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.18.3
hvplot	0.9.2
hyperlink	21.0.0
icc_rt	2022.1.0
icu	73.1
idna	3.4
imagecodecs	2023.1.23
imageio	2.33.1
imagesize	1.4.1
imbalanced-learn	0.11.0
importlib-metadata	7.0.1
importlib_metadata	7.0.1
incremental	22.10.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.28.0
ipython	8.20.0
ipython_genutils	0.2.0
ipywidgets	7.6.5
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.1.0
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	1.0.1
jinja2	3.1.3
jmespath	1.0.1
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.32
jsonpointer	2.1
jsonschema	4.19.2
jsonschema-specifications	2023.7.1
jupyter	1.0.0
jupyter-lsp	2.2.0
jupyter_client	8.6.0
jupyter_console	6.6.3
jupyter_core	5.5.0

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Package Name	win-64
jupyter_events	0.8.0
jupyter_server	2.10.0
jupyter_server_terminals	0.4.4
jupyterlab	4.0.11
jupyterlab-variableinspector	3.1.0
jupyterlab_pygments	0.1.2
jupyterlab_server	2.25.1
jupyterlab_widgets	3.0.9
keyring	23.13.1
kiwisolver	1.4.4
krb5	1.20.1
lazy-object-proxy	1.6.0
lazy_loader	0.3
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libavif	0.11.1
libboost	1.82.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.5.0
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4
libiconv	1.16
liblief	0.12.3
libmamba	1.5.6
libmambapy	1.5.6
libpng	1.6.39
libpq	12.17
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.24
libspatialindex	1.9.3
libssh2	1.10.0
libthrift	0.15.0
libtiff	4.5.1
libwebp-base	1.3.2
libxml2	2.10.4
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.42.0
locket	1.0.0
lxml	4.9.3
lz4	4.3.2

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Package Name	win-64
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.3
matplotlib	3.8.0
matplotlib-base	3.8.0
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	2.0.2
mistune	2.0.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.8
mkl_random	1.2.4
more-itertools	10.1.0
mpc	1.1.0
mpfr	4.0.2
mpir	3.0.0
mpmath	1.3.0
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.4
multipledispatch	0.6.0
munkres	1.1.4
mypy	1.8.0
mypy_extensions	1.0.0
navigator-updater	0.4.0
nbclient	0.8.0
nbconvert	7.10.0
nbformat	5.9.2
nest-asyncio	1.6.0
networkx	3.1
nltk	3.8.1
notebook	7.0.8
notebook-shim	0.2.3
numba	0.59.0
numexpr	2.8.7
numpy	1.26.4
numpy-base	1.26.4
numpydoc	1.5.0
openjpeg	2.4.0
openpyxl	3.0.10
openssl	3.0.13
orc	1.7.4

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Package Name	win-64
overrides	7.4.0
packaging	23.1
pandas	2.1.4
pandocfilters	1.5.0
panel	1.3.8
param	2.0.2
paramiko	2.8.1
parsel	1.8.1
parso	0.8.3
partd	1.4.1
pathlib	1.0.1
pathspec	0.10.3
patsy	0.5.3
pcre2	10.42
pexpect	4.8.0
pickleshare	0.7.5
pillow	10.2.0
pip	23.3.1
pkce	1.0.3
pkginfo	1.9.6
platformdirs	3.10.0
plotly	5.9.0
pluggy	1.0.0
ply	3.11
powershell_shortcut	0.0.1
prometheus_client	0.14.1
prompt-toolkit	3.0.43
prompt_toolkit	3.0.43
protego	0.1.16
protobuf	3.20.3
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	9.0.0
py-lief	0.12.3
pyarrow	14.0.2
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	4
pycodestyle	2.10.0
pycosat	0.6.6
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydantic	1.10.12
pydeck	0.8.0
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1

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Package Name	win-64
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	2.3.0
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	5.0.1
pyopenssl	24.0.0
pyparsing	3.0.9
pyqt	5.15.10
pyqt5-sip	12.13.0
pyqtwebengine	5.15.10
pysocks	1.7.1
pytables	3.9.2
pytest	7.4.0
python	3.11.7
python-dateutil	2.8.2
python-dotenv	0.21.0
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	1.2.1
python-lsp-jsonrpc	1.0.0
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
python-tzdata	2023.3
pytoolconfig	1.2.6
pytz	2023.3.post1
pyviz_comms	3.0.0
pywavelets	1.5.0
pywin32	305
pywin32-ctypes	0.2.0
pywinpty	2.0.10
pyyaml	6.0.1
pyzmq	25.1.2
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.4.1
queuelib	1.6.2
re2	2022.04.01
referencing	0.30.2
regex	2023.10.3
reproc	14.2.4
reproc-cpp	14.2.4

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Package Name	win-64
requests	2.31.0
requests-file	1.5.1
requests-toolbelt	1.0.0
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.3.5
rope	1.7.0
rpds-py	0.10.6
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21
s3fs	2023.10.0
scikit-image	0.22.0
scikit-learn	1.2.2
scipy	1.11.4
scrapy	2.8.0
seaborn	0.12.2
semver	2.13.0
send2trash	1.8.2
service_identity	18.1.0
setuptools	68.2.2
sip	6.7.12
six	1.16.0
smart_open	5.2.1
smmap	4.0.0
snappy	1.1.10
sniffio	1.3.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.5
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.5
spyder	5.4.3
spyder-kernels	2.4.4
sqlalchemy	2.0.25
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.14.0
streamlit	1.30.0
sympy	1.12
tabulate	0.9.0
tbb	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1

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Package Name	win-64
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2023.4.12
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
toml	0.10.2
tomlkit	0.11.1
toolz	0.12.0
tornado	6.3.3
tqdm	4.65.0
traitlets	5.7.1
truststore	0.8.0
twisted	23.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.9.0
typing_extensions	4.9.0
tzdata	2023d
tzlocal	2.1
uc-micro-py	1.0.1
ujson	5.4.0
unidecode	1.2.0
urllib3	2.0.7
utf8proc	2.6.1
validators	0.18.2
vc	14.2
vs2015_runtime	14.27.29016
w3lib	2.1.2
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	0.58.0
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.41.2
widgetsnbextension	3.5.2
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2023.6.0
xlwings	0.29.1
xyzservices	2022.9.0
xz	5.4.5
yaml	0.2.5
yaml-cpp	0.8.0
yapf	0.31.0
yarl	1.9.3
zeromq	4.3.5

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Table 12 – continued from previous page

Package Name	win-64
zfp	1.0.0
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.19.0
zstd	1.5.5

Anaconda 2023.09-0 (Sep 29, 2023)

Python version: 3.11.5

User-facing Changes

This version of the Anaconda Distribution has many major updates:

- OpenSSL 3.0
- Numpy 1.25.2
- matplotlib 2.7.2
- pandas 2.0.3
- huggingface_hub 0.15.1
- conda 23.7.4
- Anaconda Navigator 2.5.0

A couple of important additions:

- Kaliedo (v0.2.1), a static data viz generator for web-based visualization libraries
- anaconda-anon-usage, a package designed to augment the anonymous telemetry being sent by conda

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_anaconda_depends	2023.09	2023.09	2023.09	2023.09	2023.09	2023.09
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
abseil-cpp	20211102.0	20211102.0	20211102.0		20211102.0	202111
aiobotocore	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
aiofiles	22.1.0	22.1.0	22.1.0		22.1.0	22.1.0
aiohttp	3.8.5	3.8.5	3.8.5	3.8.5	3.8.5	3.8.5
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0		0.18.0	0.18.0
alabaster	0.7.12	0.7.12			0.7.12	0.7.12
anaconda-anon-usage	0.4.2	0.4.2	0.4.2	0.4.2	0.4.2	0.4.2
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.1	1.12.1	1.12.1	1.12.1	1.12.1	1.12.1
anaconda-cloud-auth	0.1.3	0.1.3			0.1.3	0.1.3
anaconda-navigator	2.5.0	2.5.0			2.5.0	2.5.0
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0
aom	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices					0.3.0	0.3.0
appnope					0.1.2	0.1.2
appscript					1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3			1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0			1.4.0	1.4.0
attrs	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	1.6.0	1.6.0			1.6.0	1.6.0
aws-c-common	0.6.8	0.6.8	0.6.8		0.6.8	0.6.8
aws-c-event-stream	0.1.6	0.1.6	0.1.6		0.1.6	0.1.6
aws-checksums	0.1.11	0.1.11	0.1.11		0.1.11	0.1.11
aws-sdk-cpp	1.8.185	1.8.185	1.8.185		1.8.185	1.8.185
babel	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post
bcrypt	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4			0.4.4	0.4.4
black	23.3.0	23.3.0			23.3.0	23.3.0
blas	1.0	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.2.1	3.2.1	3.2.1	2.4.3	3.2.1	3.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.82.0		1.73.0	1.73.0

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
boto3				1.26.76		
botocore	1.29.76	1.29.76	1.29.76	1.29.76	1.29.76	1.29.76
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
c-blosc2	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08
cctools					949.0.1	949.0.1
cctools_osx-64						949.0.1
cctools_osx-arm64					949.0.1	
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.7.4	23.7.4	23.7.4	23.7.4	23.7.4	23.7.4
conda-build	3.26.1	3.26.1	3.26.1	3.26.1	3.26.1	3.26.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-index	0.3.0	0.3.0	0.3.0	0.3.0	0.3.0	0.3.0
conda-libmamba-solver	23.7.0	23.7.0	23.7.0	23.7.0	23.7.0	23.7.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75			1.0.75	1.0.75
conda-token	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2
console_shortcut						
constantly	15.1.0	15.1.0	15.1.0		15.1.0	15.1.0
contourpy	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3			1.7.3	1.7.3
cryptography	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3
cssselect	1.1.0	1.1.0	1.1.0		1.1.0	1.1.0
curl	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28			2.1.28	2.1.28
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1					
dal	2023.1.1					
dask	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
dask-core	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.
datasets	2.12.0	2.12.0	2.12.0		2.12.0	2.12.0
datashader	0.15.2	0.15.2	0.15.2		0.15.2	0.15.2
datashape	0.5.4	0.5.4	0.5.4		0.5.4	0.5.4
dav1d	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18				
debugpy	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713			20200713	202007
dill	0.3.6	0.3.6	0.3.6	0.3.7	0.3.6	0.3.6
distributed	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.0	2023.6.
docstring-to-markdown	0.11	0.11			0.11	0.11
docutils	0.18.1	0.18.1			0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.5.0	2.5.0				
filelock	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0			6.0.0	6.0.0
flask	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
font-ttf-dejavu-sans-mono	2.37	2.37				
font-ttf-inconsolata	2.001	2.001				
font-ttf-source-code-pro	2.030	2.030				
font-ttf-ubuntu	0.83	0.83				
fontconfig	2.14.1	2.14.1				
fonts-anaconda	1	1				
fonttools	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.4.0	2023.4.0	2023.4.0	2023.4.
future	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0		4.3.0	4.3.0
gettext					0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2		2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1			2.69.1	2.69.1
glob2	0.7	0.7	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0		0.5.0	0.5.0
gmp	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.48.2	1.48.2	1.48.2		1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1			1.14.1	1.14.1
gstreamer	1.14.1	1.14.1			1.14.1	1.14.1
h5py	3.9.0	3.9.0	3.9.0	3.7.0	3.9.0	3.9.0
hdf5	1.12.1	1.12.1	1.12.1	1.10.6	1.12.1	1.12.1
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.17.1	1.17.1	1.17.1	1.14.8	1.17.1	1.17.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
huggingface_hub	0.15.1	0.15.1	0.15.1		0.15.1	0.15.1
hvplot	0.8.4	0.8.4	0.8.4	0.7.3	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt						
icu	58.2	68.1	73.1	73.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
imagecodecs	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1.23	2023.1.
imageio	2.31.1	2.31.1	2.31.1	2.26.0	2.31.1	2.31.1
imagesize	1.4.1	1.4.1			1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0			6.0.0	6.0.0
incremental	21.3.0	21.3.0	21.3.0		21.3.0	21.3.0
inflection	0.5.1	0.5.1			0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0					
intervaltree	3.1.0	3.1.0			3.1.0	3.1.0
ipykernel	6.25.0	6.25.0	6.25.0	6.25.0	6.25.0	6.25.0
ipython	8.15.0	8.15.0	8.15.0	8.15.0	8.15.0	8.15.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.0.4	1.0.4	1.0.4		1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1			3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1				
jellyfish	1.0.1	1.0.1			1.0.1	1.0.1
jinja2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0			0.2.0	0.2.0
jmespath	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e	9e	9e
jq	1.6	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9	7.4.9	7.4.9	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3		0.6.3	0.6.3
jupyter_server	1.23.4	1.23.4	1.23.4	1.23.4	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0		0.9.0	0.9.0
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0		0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4	0.2.4		0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2	3.6.3	3.6.3

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1	1.1	1.1
kaleido-core	0.2.1	0.2.1			0.2.1	0.2.1
keyring	23.13.1	23.13.1			23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1	0.2	0.2
lcms2	2.12	2.12	2.12	2.12	2.12	2.12
ld64					530	530
ld64_osx-64						530
ld64_osx-arm64					530	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
ldid					2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libavif	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
libboost	1.73.0	1.73.0	1.82.0		1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6			14.0.6	14.0.6
libclang13	14.0.6	14.0.6			14.0.6	14.0.6
libcups	2.4.2	2.4.2				
libcurl	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1
libcxx					14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12		2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran					5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
libmambapy	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libpq	12.15	12.15			12.15	12.15
libprotobuf	3.20.3	3.20.3	3.20.3		3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3			1.9.3	1.9.3
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0		0.15.0	0.15.0
libtiff	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libwebp	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2
libwebp-base	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15				
libxkbcommon	1.0.1	1.0.1				
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37	1.1.37	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0	2.0.0		2.0.0	2.0.0
llvm-openmp					14.0.6	14.0.6
llvmlite	0.40.0	0.40.0	0.40.0		0.40.0	0.40.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.3	4.9.3	4.9.3	4.9.3	4.9.3	4.9.3
lz4	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10	2.10	2.10
m2-msys2-runtime						
m2-patch						
m2w64-libwinpthread-git						
markdown	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0	2.2.0		2.2.0	2.2.0
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
mathjax	2.7.5	2.7.5			2.7.5	2.7.5
matplotlib	3.7.2	3.7.2	3.7.2	3.7.2	3.7.2	3.7.2
matplotlib-base	3.7.2	3.7.2	3.7.2	3.7.2	3.7.2	3.7.2
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0	0.3.0		0.3.0	0.3.0
mdurl	0.1.0	0.1.0	0.1.0		0.1.0	0.1.0
menuinst						
mistune	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0					
mkl-service	2.4.0					
mkl_fft	1.3.8					
mkl_random	1.2.4					
mock				4.0.3		
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0					
mpich	4.1.1					

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
mpmath	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch						
multidict	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0		0.6.0	0.6.0
multiprocess	0.70.14	0.70.14	0.70.14		0.70.14	0.70.14
munkres	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	1.0.0	1.0.0			1.0.0	1.0.0
mysql	5.7.24	5.7.24			5.7.24	5.7.24
navigator-updater	0.4.0	0.4.0			0.4.0	0.4.0
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.9.2	5.9.2	5.9.2	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
networkx	3.1	3.1	3.1	3.1	3.1	3.1
nltk	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1
notebook	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35				
nss	3.89.1	3.89.1				
numba	0.57.1	0.57.1	0.57.1		0.57.1	0.57.0
numexpr	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.2	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3	1.24.3	1.25.2	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0			1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
openssl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
orc	1.7.4	1.7.4	1.7.4		1.7.4	1.7.4
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pandas	2.0.3	2.0.3	2.0.3	2.0.3	2.0.3	2.0.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.2.3	1.2.3	1.2.3	0.12.6	1.2.3	1.2.3
param	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0
paramiko						
parsel	1.6.0	1.6.0	1.6.0		1.6.0	1.6.0
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2		
pathlib	1.0.1	1.0.1			1.0.1	1.0.1
pathspec	0.10.3	0.10.3			0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45			8.45	8.45
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pep8	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1
pkce	1.0.3	1.0.3			1.0.3	1.0.3
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
plotly	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11			3.11	3.11
powershell_shortcut						
poyo	0.5.0	0.5.0			0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16		0.1.16	0.1.16
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0		8.0.0	8.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
pyasn1	0.4.8	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	4	4	4	4	4	4
pycodestyle	2.10.0	2.10.0			2.10.0	2.10.0
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydantic	1.10.8	1.10.8			1.10.8	1.10.8
pydispatcher	2.0.5	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0			6.3.0	6.3.0
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0			2.4.0	2.4.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0			2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0			0.4.0	0.4.0
pynacl						
pyobjc-core					9.0	9.0
pyobjc-framework-cocoa					9.0	9.0
pyobjc-framework-coreservices					9.0	9.0
pyobjc-framework-fsevents					9.0	9.0
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7			5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0			12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7			5.15.7	5.15.7

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0	3.8.0	3.8.0
pytest	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0
python	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0			0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
python-kaleido	0.2.1	0.2.1			0.2.1	0.2.1
python-libarchive-c	2.9	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1			1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0			1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2			1.7.2	1.7.2
python-slugify	5.0.2	5.0.2			5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3	2023.3	2023.3	2023.3
python-xxhash	2.0.2	2.0.2	2.0.2		2.0.2	2.0.2
python.app					3	3
pytoolconfig	1.2.5	1.2.5			1.2.5	1.2.5
pytz	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
pywin32						
pywin32-ctypes						
pywinpty						
pyxdg	0.27	0.27				
pyyaml	6.0	6.0	6.0	6.0	6.0	6.0
pyzmq	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2			3.0.2	3.0.2
qstylizer	0.2.2	0.2.2			0.2.2	0.2.2
qt-main	5.15.2	5.15.2			5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9			5.15.9	5.15.9
qtawesome	1.2.2	1.2.2			1.2.2	1.2.2
qtconsole	5.4.2	5.4.2			5.4.2	5.4.2
qtpy	2.2.0	2.2.0			2.2.0	2.2.0
qtwebkit	5.212	5.212			5.212	5.212
queuelib	1.5.0	1.5.0	1.5.0		1.5.0	1.5.0
re2	2022.04.01	2022.04.01	2022.04.01		2022.04.01	2022.04
readline	8.2	8.2	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
responses	0.13.3	0.13.3	0.13.3		0.13.3	0.13.3
rfc3339-validator	0.1.4	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1	0.1.1		0.1.1	0.1.1

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
rope	1.7.0	1.7.0			1.7.0	1.7.0
rtree	1.0.1	1.0.1			1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.4.0	2023.4.0	2023.4.0	2023.4.
s3transfer				0.6.0		
sacremoses				0.0.43		
safetensors	0.3.2	0.3.2	0.3.2		0.3.2	0.3.2
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0	1.3.0	1.2.2	1.3.0	1.3.0
scikit-learn-intelex	2023.1.1					
scipy	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
scrapy	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
seaborn	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1				
send2trash	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0
sip	6.6.2	6.6.2			6.6.2	6.6.2
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	5.2.1		5.2.1	5.2.1
snappy	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2			5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0			2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1			1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3			1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5			1.1.5	1.1.5
spyder	5.4.3	5.4.3			5.4.3	5.4.3
spyder-kernels	2.4.4	2.4.4			2.4.4	2.4.4
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0
sympy	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10
tapi					1100.0.11	1000.10
tbb	2021.8.0	2021.8.0	2021.8.0		2021.8.0	2021.8.
tbb4py	2021.8.0					
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3			1.3	1.3
textdistance	4.2.1	4.2.1			4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
three-merge	0.1.1	0.1.1			0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4.12	2023.4.
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
tokenizers	0.13.2	0.13.2	0.13.2		0.13.2	0.13.2
toml	0.10.2	0.10.2			0.10.2	0.10.2
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.3.2	6.3.2	6.3.2	6.3.2	6.3.2	6.3.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.32.1	4.32.1	4.32.1	2.1.1	4.32.1	4.32.1
twisted	22.10.0	22.10.0	22.10.0		22.10.0	22.10.0
twisted-iocpsupport						
typing-extensions	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1	1.0.1	1.0.1		1.0.1	1.0.1
ujson	5.4.0	5.4.0			5.4.0	5.4.0
unidecode	1.2.0	1.2.0			1.2.0	1.2.0
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1		2.6.1	2.6.1
vc						
vs2015_runtime						
w3lib	1.21.0	1.21.0	1.21.0		1.21.0	1.21.0
watchdog	2.1.6	2.1.6			2.1.6	2.1.6
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2			1.0.2	1.0.2
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5
win_inet_pton						
winpty						
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2			3.0.2	3.0.2
xarray	2023.6.0	2023.6.0	2023.6.0		2023.6.0	2023.6.
xlwings					0.29.1	0.29.1
xxhash	0.8.0	0.8.0	0.8.0		0.8.0	0.8.0
xyzservices	2022.9.0	2022.9.0	2022.9.0		2022.9.0	2022.9.
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9		0.5.9	0.5.9
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0			0.31.0	0.31.0
yarl	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2		0.8.2	0.8.2

Table 13 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
zeromq	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4
zfp	1.0.0		1.0.0		1.0.0	1.0.0
zict	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
zope	1.0	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_anaconda_depends	2023.09	2023.09	2023.09	2023.09
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	20211102.0	
aiobotocore	2.5.0	2.5.0	2.5.0	2.5.0
aiofiles	22.1.0	22.1.0	22.1.0	
aiohttp	3.8.5	3.8.5	3.8.5	3.8.5
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0	
alabaster	0.7.12	0.7.12		
anaconda-anon-usage	0.4.2	0.4.2	0.4.2	0.4.2
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.1	1.12.1	1.12.1	1.12.1
anaconda-cloud-auth	0.1.3	0.1.3		
anaconda-navigator	2.5.0	2.5.0		
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0
aom	3.6.0	3.6.0	3.6.0	3.6.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3		
arrow-cpp	11.0.0	11.0.0	11.0.0	
astroid	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0		
attrs	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0	
autopep8	1.6.0	1.6.0		
aws-c-common	0.6.8	0.6.8	0.6.8	
aws-c-event-stream	0.1.6	0.1.6	0.1.6	

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Table 14 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
aws-checksums	0.1.11	0.1.11	0.1.11	
aws-sdk-cpp	1.8.185	1.8.185	1.8.185	
babel	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0	3.2.0	
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4		
black	23.3.0	23.3.0		
blas	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.2.1	3.2.1	3.2.1	2.4.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.82.0	
boto3				1.26.76
botocore	1.29.76	1.29.76	1.29.76	1.29.76
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1
c-blosc2	2.8.0	2.8.0	2.8.0	
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.7.4	23.7.4	23.7.4	23.7.4
conda-build	3.26.1	3.26.1	3.26.1	3.26.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0
conda-index	0.3.0	0.3.0	0.3.0	0.3.0
conda-libmamba-solver	23.7.0	23.7.0	23.7.0	23.7.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75		

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
conda-token	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2
constantly	15.1.0	15.1.0	15.1.0	
contourpy	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3		
cryptography	41.0.3	41.0.3	41.0.3	41.0.3
cssselect	1.1.0	1.1.0	1.1.0	
curl	8.2.1	8.2.1	8.2.1	8.2.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28		
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1			
dal	2023.1.1			
dask	2023.6.0	2023.6.0	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.6.0	2023.6.0	2023.6.0
datasets	2.12.0	2.12.0	2.12.0	
datashader	0.15.2	0.15.2	0.15.2	
datashape	0.5.4	0.5.4	0.5.4	
dav1d	1.2.1	1.2.1	1.2.1	1.2.1
dbus	1.13.18	1.13.18		
debugpy	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		
dill	0.3.6	0.3.6	0.3.6	0.3.7
distributed	2023.6.0	2023.6.0	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11		
docutils	0.18.1	0.18.1		
entrypoints	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.5.0	2.5.0		
filelock	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0		
flask	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0
font-ttf-dejavu-sans-mono	2.37	2.37		
font-ttf-inconsolata	2.001	2.001		
font-ttf-source-code-pro	2.030	2.030		
font-ttf-ubuntu	0.83	0.83		
fontconfig	2.14.1	2.14.1		
fonts-anaconda	1	1		
fonttools	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.4.0	2023.4.0
future	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0	
gflags	2.2.2	2.2.2	2.2.2	
giflib	5.2.1	5.2.1	5.2.1	5.2.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
glib	2.69.1	2.69.1		
glob2	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0	
gmp	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.48.2	1.48.2	1.48.2	
gst-plugins-base	1.14.1	1.14.1		
gstreamer	1.14.1	1.14.1		
h5py	3.9.0	3.9.0	3.9.0	3.7.0
hdf5	1.12.1	1.12.1	1.12.1	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.17.1	1.17.1	1.17.1	1.14.8
huggingface_hub	0.15.1	0.15.1	0.15.1	
hvplot	0.8.4	0.8.4	0.8.4	0.7.3
hyperlink	21.0.0	21.0.0	21.0.0	
icu	58.2	68.1	73.1	73.1
idna	3.4	3.4	3.4	3.3
imagecodecs	2023.1.23	2023.1.23	2023.1.23	2023.1.23
imageio	2.31.1	2.31.1	2.31.1	2.26.0
imagesize	1.4.1	1.4.1		
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0		
incremental	21.3.0	21.3.0	21.3.0	
inflection	0.5.1	0.5.1		
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0			
intervaltree	3.1.0	3.1.0		
ipykernel	6.25.0	6.25.0	6.25.0	6.25.0
ipython	8.15.0	8.15.0	8.15.0	8.15.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0	
itemloaders	1.0.4	1.0.4	1.0.4	
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1		
jedi	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1		
jellyfish	1.0.1	1.0.1		
jinja2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0		
jmespath	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e
jq	1.6	1.6	1.6	
json5	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
jsonpointer	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3	
jupyter_server	1.23.4	1.23.4	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0	
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0	
jupyter_ydoc	0.2.4	0.2.4	0.2.4	
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1
kaleido-core	0.2.1	0.2.1		
keyring	23.13.1	23.13.1		
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1
lcms2	2.12	2.12	2.12	2.12
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
lerc	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libavif	0.11.1	0.11.1	0.11.1	0.11.1
libboost	1.73.0	1.73.0	1.82.0	
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9
libclang	14.0.6	14.0.6		
libclang13	14.0.6	14.0.6		
libcups	2.4.2	2.4.2		
libcurl	8.2.1	8.2.1	8.2.1	8.2.1
libdeflate	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
liblief	0.12.3	0.12.3	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6	14.0.6	

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
libmamba	1.5.1	1.5.1	1.5.1	1.5.1
libmambapy	1.5.1	1.5.1	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libopenblas		0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.15		
libprotobuf	3.20.3	3.20.3	3.20.3	
libsodium	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.24	0.7.24	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3		
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0	
libtiff	4.5.1	4.5.1	4.5.1	4.5.1
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libwebp	1.3.2	1.3.2	1.3.2	1.3.2
libwebp-base	1.3.2	1.3.2	1.3.2	1.3.2
libxcb	1.15	1.15		
libxkbcommon	1.0.1	1.0.1		
libxml2	2.10.4	2.10.4	2.10.4	2.10.4
libxslt	1.1.37	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0	2.0.0	
llvmlite	0.40.0	0.40.0	0.40.0	
locket	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.3	4.9.3	4.9.3	4.9.3
lz4	4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10
markdown	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0	2.2.0	
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1
mathjax	2.7.5	2.7.5		
matplotlib	3.7.2	3.7.2	3.7.2	3.7.2
matplotlib-base	3.7.2	3.7.2	3.7.2	3.7.2
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0	0.3.0	
mdurl	0.1.0	0.1.0	0.1.0	
mistune	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0			
mkl-service	2.4.0			
mkl_fft	1.3.8			
mkl_random	1.2.4			
mock				4.0.3
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0			
mpich	4.1.1			

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
mpmath	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3
multidict	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0	
multiprocess	0.70.14	0.70.14	0.70.14	
munkres	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	1.0.0	1.0.0		
mysql	5.7.24	5.7.24		
navigator-updater	0.4.0	0.4.0		
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.9.2	5.9.2	5.9.2	5.9.2
ncurses	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6
networkx	3.1	3.1	3.1	3.1
nltk	3.8.1	3.8.1	3.8.1	3.8.1
notebook	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35		
nss	3.89.1	3.89.1		
numba	0.57.1	0.57.1	0.57.1	
numexpr	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.2
numpy-base	1.24.3	1.24.3	1.24.3	1.25.2
numpydoc	1.5.0	1.5.0		
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10
openssl	3.0.10	3.0.10	3.0.10	3.0.10
orc	1.7.4	1.7.4	1.7.4	
packaging	23.1	23.1	23.1	23.1
pandas	2.0.3	2.0.3	2.0.3	2.0.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.2.3	1.2.3	1.2.3	0.12.6
param	1.13.0	1.13.0	1.13.0	1.13.0
parsel	1.6.0	1.6.0	1.6.0	
parso	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.4.0	1.4.0	1.4.0	1.4.0
patch	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2
pathlib	1.0.1	1.0.1		
pathspec	0.10.3	0.10.3		
patsy	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45		
pcre2	10.42	10.42	10.42	10.42
pep8	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pip	23.2.1	23.2.1	23.2.1	23.2.1
pkce	1.0.3	1.0.3		
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0
plotly	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		
poyo	0.5.0	0.5.0		
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16	
psutil	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0	
py-lief	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0	
pyasn1	0.4.8	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	0.2.8	
pybind11-abi	4	4	4	4
pycodestyle	2.10.0	2.10.0		
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2
pydantic	1.10.8	1.10.8		
pydispatcher	2.0.5	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0		
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0		
pylint	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0		
pyls-spyder	0.4.0	0.4.0		
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7		
pyqt5-sip	12.11.0	12.11.0		
pyqtwebengine	5.15.7	5.15.7		
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0
pytest	7.4.0	7.4.0	7.4.0	7.4.0
python	3.11.5	3.11.5	3.11.5	3.11.5
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0		
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
python-json-logger	2.0.7	2.0.7	2.0.7	
python-kaleido	0.2.1	0.2.1		
python-libarchive-c	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1		
python-lsp-jsonrpc	1.0.0	1.0.0		
python-lsp-server	1.7.2	1.7.2		
python-slugify	5.0.2	5.0.2		
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1
python-tzdata	2023.3	2023.3	2023.3	2023.3
python-xxhash	2.0.2	2.0.2	2.0.2	
pytoolconfig	1.2.5	1.2.5		
pytz	2023.3.post1	2023.3.post1	2023.3.post1	2023.3.post1
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1
pyxdg	0.27	0.27		
pyyaml	6.0	6.0	6.0	6.0
pyzmq	23.2.0	23.2.0	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2		
qstylizer	0.2.2	0.2.2		
qt-main	5.15.2	5.15.2		
qt-webengine	5.15.9	5.15.9		
qtawesome	1.2.2	1.2.2		
qtconsole	5.4.2	5.4.2		
qtpy	2.2.0	2.2.0		
qtwebkit	5.212	5.212		
queuelib	1.5.0	1.5.0	1.5.0	
re2	2022.04.01	2022.04.01	2022.04.01	
readline	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1	1.5.1	
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0
responses	0.13.3	0.13.3	0.13.3	
rfc3339-validator	0.1.4	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	0.1.1	
rope	1.7.0	1.7.0		
rtree	1.0.1	1.0.1		
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.4.0	2023.4.0
s3transfer				0.6.0
sacremoses				0.0.43
safetensors	0.3.2	0.3.2	0.3.2	
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0	1.3.0	1.2.2
scikit-learn-intelex	2023.1.1			
scipy	1.11.1	1.11.1	1.11.1	1.11.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
scrapy	2.8.0	2.8.0	2.8.0	
seaborn	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1		
send2trash	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0	
setuptools	68.0.0	68.0.0	68.0.0	68.0.0
sip	6.6.2	6.6.2		
six	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	5.2.1	
snappy	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2		
sphinxcontrib-applehelp	1.0.2	1.0.2		
sphinxcontrib-devhelp	1.0.2	1.0.2		
sphinxcontrib-htmlhelp	2.0.0	2.0.0		
sphinxcontrib-jsmath	1.0.1	1.0.1		
sphinxcontrib-qthelp	1.0.3	1.0.3		
sphinxcontrib-serializinghtml	1.1.5	1.1.5		
spyder	5.4.3	5.4.3		
spyder-kernels	2.4.4	2.4.4		
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0	0.14.0	0.14.0
sympy	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10
tbb	2021.8.0	2021.8.0	2021.8.0	
tbb4py	2021.8.0			
tblib	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3		
textdistance	4.2.1	4.2.1		
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		
tiffile	2023.4.12	2023.4.12	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0	
tokenizers	0.13.2	0.13.2	0.13.2	
toml	0.10.2	0.10.2		
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.3.2	6.3.2	6.3.2	6.3.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.32.1	4.32.1	4.32.1	2.1.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
twisted	22.10.0	22.10.0	22.10.0	
typing-extensions	4.7.1	4.7.1	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1	4.7.1	4.7.1
tzdata	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1	1.0.1	1.0.1	
ujson	5.4.0	5.4.0		
unidecode	1.2.0	1.2.0		
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1	
w3lib	1.21.0	1.21.0	1.21.0	
watchdog	2.1.6	2.1.6		
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2		
wheel	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5
wrapt	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		
xarray	2023.6.0	2023.6.0	2023.6.0	
xxhash	0.8.0	0.8.0	0.8.0	
xyzservices	2022.9.0	2022.9.0	2022.9.0	
xz	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9	
yaml	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0		
yarl	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2	
zeromq	4.3.4	4.3.4	4.3.4	4.3.4
zfp	1.0.0		1.0.0	
zict	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7	
zope	1.0	1.0	1.0	
zope.interface	5.4.0	5.4.0	5.4.0	
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2023.09	2023.09
abseil-cpp	20211102.0	20211102.0
aiobotocore	2.5.0	2.5.0
aiofiles	22.1.0	22.1.0
aiohttp	3.8.5	3.8.5
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0
alabaster	0.7.12	0.7.12
anaconda-anon-usage	0.4.2	0.4.2
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.12.1	1.12.1
anaconda-cloud-auth	0.1.3	0.1.3
anaconda-navigator	2.5.0	2.5.0
anaconda-project	0.11.1	0.11.1
anyio	3.5.0	3.5.0
aom	3.6.0	3.6.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.2	0.1.2
appscript	1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0
astroid	2.14.2	2.14.2
astropy	5.1	5.1
asttokens	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0
attrs	22.1.0	22.1.0
automat	20.2.0	20.2.0
autopep8	1.6.0	1.6.0
aws-c-common	0.6.8	0.6.8
aws-c-event-stream	0.1.6	0.1.6
aws-checksums	0.1.11	0.1.11
aws-sdk-cpp	1.8.185	1.8.185
babel	2.11.0	2.11.0
backcall	0.2.0	0.2.0
backports	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4
backports.tempfile	1.0	1.0
backports.weakref	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4
black	23.3.0	23.3.0
blas	1.0	1.0
bleach	4.1.0	4.1.0

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Package Name	osx-arm64	osx-64
blosc	1.21.3	1.21.3
bokeh	3.2.1	3.2.1
boltons	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0
botocore	1.29.76	1.29.76
bottleneck	1.3.5	1.3.5
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
c-blosc2	2.8.0	2.8.0
ca-certificates	2023.08.22	2023.08.22
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1
clyent	1.2.2	1.2.2
colorama	0.4.6	0.4.6
colorcet	3.0.1	3.0.1
comm	0.1.2	0.1.2
conda	23.7.4	23.7.4
conda-build	3.26.1	3.26.1
conda-content-trust	0.2.0	0.2.0
conda-index	0.3.0	0.3.0
conda-libmamba-solver	23.7.0	23.7.0
conda-pack	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
conda-repo-cli	1.0.75	1.0.75
conda-token	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2
constantly	15.1.0	15.1.0
contourpy	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3
cryptography	41.0.3	41.0.3
cssselect	1.1.0	1.1.0
curl	8.2.1	8.2.1
cycler	0.11.0	0.11.0
cyrus-sasl	2.1.28	2.1.28
cytoolz	0.12.0	0.12.0
dask	2023.6.0	2023.6.0

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Table 15 – continued from previous page

Package Name	osx-arm64	osx-64
dask-core	2023.6.0	2023.6.0
datasets	2.12.0	2.12.0
datashader	0.15.2	0.15.2
datashape	0.5.4	0.5.4
dav1d	1.2.1	1.2.1
debugpy	1.6.7	1.6.7
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.6	0.3.6
distributed	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
filelock	3.9.0	3.9.0
flake8	6.0.0	6.0.0
flask	2.2.2	2.2.2
fmt	9.1.0	9.1.0
fonttools	4.25.0	4.25.0
freetype	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0
future	0.18.3	0.18.3
gensim	4.3.0	4.3.0
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
glib	2.69.1	2.69.1
glob2	0.7	0.7
glog	0.5.0	0.5.0
gmp	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1
grpc-cpp	1.48.2	1.48.2
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
h5py	3.9.0	3.9.0
hdf5	1.12.1	1.12.1
heapdict	1.0.1	1.0.1
holoviews	1.17.1	1.17.1
huggingface_hub	0.15.1	0.15.1
hvplot	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0
icu	68.1	58.2
idna	3.4	3.4
imagecodecs	2023.1.23	2023.1.23
imageio	2.31.1	2.31.1
imagesize	1.4.1	1.4.1

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Package Name	osx-arm64	osx-64
imbalanced-learn	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0
incremental	21.3.0	21.3.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.6.8	0.6.8
intervaltree	3.1.0	3.1.0
ipykernel	6.25.0	6.25.0
ipython	8.15.0	8.15.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4
isort	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0
itemloaders	1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	1.0.1	1.0.1
jinja2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0
jmespath	0.10.0	0.10.0
joblib	1.2.0	1.2.0
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
jsonschema	4.17.3	4.17.3
jupyter	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3
jupyter_server	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0
jupyter_server_ydoc	0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5
jxrlib	1.1	1.1
kaleido-core	0.2.1	0.2.1
keyring	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4
krb5	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0
lazy_loader	0.2	0.2
lcms2	2.12	2.12

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Table 15 – continued from previous page

Package Name	osx-arm64	osx-64
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libavif	0.11.1	0.11.1
libboost	1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.2.1	8.2.1
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.5.1	1.5.1
libmambapy	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.15	12.15
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.24	0.7.24
libspatialindex	1.9.3	1.9.3
libssh2	1.10.0	1.10.0
libthrift	0.15.0	0.15.0
libtiff	4.5.1	4.5.1
libwebp	1.3.2	1.3.2
libwebp-base	1.3.2	1.3.2
libxml2	2.10.4	2.10.4
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.40.0	0.40.0
locket	1.0.0	1.0.0
lxml	4.9.3	4.9.3
lz4	4.3.2	4.3.2

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Package Name	osx-arm64	osx-64
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.1	2.1.1
mathjax	2.7.5	2.7.5
matplotlib	3.7.2	3.7.2
matplotlib-base	3.7.2	3.7.2
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
mistune	0.8.4	0.8.4
more-itertools	8.12.0	8.12.0
mpc	1.1.0	1.1.0
mpfr	4.0.2	4.0.2
mpmath	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3
multidict	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0
multiprocess	0.70.14	0.70.14
munkres	1.1.4	1.1.4
mypy_extensions	1.0.0	1.0.0
mysql	5.7.24	5.7.24
navigator-updater	0.4.0	0.4.0
nbclassic	0.5.5	0.5.5
nbclient	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4
nbformat	5.9.2	5.9.2
ncurses	6.4	6.4
nest-asyncio	1.5.6	1.5.6
networkx	3.1	3.1
nltk	3.8.1	3.8.1
notebook	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2
numba	0.57.1	0.57.0
numexpr	2.8.4	2.8.4
numpy	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10
openssl	3.0.10	3.0.10
orc	1.7.4	1.7.4
packaging	23.1	23.1
pandas	2.0.3	2.0.3
pandocfilters	1.5.0	1.5.0
panel	1.2.3	1.2.3
param	1.13.0	1.13.0

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Package Name	osx-arm64	osx-64
parsel	1.6.0	1.6.0
parso	0.8.3	0.8.3
partd	1.4.0	1.4.0
patch	2.7.6	2.7.6
pathlib	1.0.1	1.0.1
pathspec	0.10.3	0.10.3
patsy	0.5.3	0.5.3
pcre	8.45	8.45
pcre2	10.42	10.42
pep8	1.7.1	1.7.1
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	9.4.0	9.4.0
pip	23.2.1	23.2.1
pkce	1.0.3	1.0.3
pkginfo	1.9.6	1.9.6
platformdirs	3.10.0	3.10.0
plotly	5.9.0	5.9.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11
poyo	0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36
protego	0.1.16	0.1.16
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0
py-lief	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	4	4
pycodestyle	2.10.0	2.10.0
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydantic	1.10.8	1.10.8
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1
pygments	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0
pylint	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0
pyobjc-core	9.0	9.0

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Package Name	osx-arm64	osx-64
pyobjc-framework-cocoa	9.0	9.0
pyobjc-framework-coreservices	9.0	9.0
pyobjc-framework-fsevents	9.0	9.0
pyodbc	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0
pysocks	1.7.1	1.7.1
pytables	3.8.0	3.8.0
pytest	7.4.0	7.4.0
python	3.11.5	3.11.5
python-dateutil	2.8.2	2.8.2
python-dotenv	0.21.0	0.21.0
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-kaleido	0.2.1	0.2.1
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-tzdata	2023.3	2023.3
python-xxhash	2.0.2	2.0.2
python.app	3	3
pytoolconfig	1.2.5	1.2.5
pytz	2023.3.post1	2023.3.post1
pyviz_comms	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1
pyyaml	6.0	6.0
pyzmq	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2
qtpy	2.2.0	2.2.0
qtwebkit	5.212	5.212
queuelib	1.5.0	1.5.0
re2	2022.04.01	2022.04.01
readline	8.2	8.2
regex	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0

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Table 15 – continued from previous page

Package Name	osx-arm64	osx-64
requests-file	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0
responses	0.13.3	0.13.3
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rope	1.7.0	1.7.0
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0
safetensors	0.3.2	0.3.2
scikit-image	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0
scipy	1.11.1	1.11.1
scrapy	2.8.0	2.8.0
seaborn	0.12.2	0.12.2
send2trash	1.8.0	1.8.0
service_identity	18.1.0	18.1.0
setuptools	68.0.0	68.0.0
sip	6.6.2	6.6.2
six	1.16.0	1.16.0
smart_open	5.2.1	5.2.1
snappy	1.1.9	1.1.9
sniffio	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.4	2.4
sphinx	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5
spyder	5.4.3	5.4.3
spyder-kernels	2.4.4	2.4.4
sqlalchemy	1.4.39	1.4.39
sqlite	3.41.2	3.41.2
stack_data	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0
sympy	1.11.1	1.11.1
tabulate	0.8.10	0.8.10
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0

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Table 15 – continued from previous page

Package Name	osx-arm64	osx-64
three-merge	0.1.1	0.1.1
tiffile	2023.4.12	2023.4.12
tinycss2	1.2.1	1.2.1
tk	8.6.12	8.6.12
tldextract	3.2.0	3.2.0
tokenizers	0.13.2	0.13.2
toml	0.10.2	0.10.2
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.3.2	6.3.2
tqdm	4.65.0	4.65.0
traitlets	5.7.1	5.7.1
transformers	4.32.1	4.32.1
twisted	22.10.0	22.10.0
typing-extensions	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1
tzdata	2023c	2023c
uc-micro-py	1.0.1	1.0.1
ujson	5.4.0	5.4.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1
w3lib	1.21.0	1.21.0
watchdog	2.1.6	2.1.6
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2
wheel	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2023.6.0	2023.6.0
xlwings	0.29.1	0.29.1
xxhash	0.8.0	0.8.0
xyzservices	2022.9.0	2022.9.0
xz	5.4.2	5.4.2
y-py	0.5.9	0.5.9
yaml	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0
yapf	0.31.0	0.31.0
yarl	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2
zeromq	4.3.4	4.3.4
zfp	1.0.0	1.0.0
zict	2.2.0	2.2.0
zipp	3.11.0	3.11.0
zlib	1.2.13	1.2.13

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Table 15 – continued from previous page

Package Name	osx-arm64	osx-64
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2023.09
abseil-cpp	20211102.0
aiobotocore	2.5.0
aiofiles	22.1.0
aiohttp	3.8.5
aioitertools	0.7.1
aiosignal	1.2.0
aiosqlite	0.18.0
alabaster	0.7.12
anaconda-anon-usage	0.4.2
anaconda-catalogs	0.2.0
anaconda-client	1.12.1
anaconda-cloud-auth	0.1.3
anaconda-navigator	2.5.0
anaconda-project	0.11.1
anyio	3.5.0
aom	3.6.0
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	11.0.0
astroid	2.14.2
astropy	5.1
asttokens	2.0.5
async-timeout	4.0.2
atomicwrites	1.4.0
attrs	22.1.0
automat	20.2.0
autopep8	1.6.0
aws-c-common	0.6.8
aws-c-event-stream	0.1.6
aws-checksums	0.1.11
aws-sdk-cpp	1.8.185
babel	2.11.0
backcall	0.2.0
backports	1.1
backports.functools_lru_cache	1.6.4
backports.tempfile	1.0

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Package Name	win-64
backports.weakref	1.0.post1
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	23.3.0
blas	1.0
bleach	4.1.0
blosc	1.21.3
bokeh	3.2.1
boltons	23.0.0
boost-cpp	1.82.0
botocore	1.29.76
bottleneck	1.3.5
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.8.0
ca-certificates	2023.08.22
certifi	2023.7.22
cffi	1.15.1
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.0.4
cloudpickle	2.2.1
clyent	1.2.2
colorama	0.4.6
colorcet	3.0.1
comm	0.1.2
conda	23.7.4
conda-build	3.26.1
conda-content-trust	0.2.0
conda-index	0.3.0
conda-libmamba-solver	23.7.0
conda-pack	0.6.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
conda-repo-cli	1.0.75
conda-token	0.4.0
conda-verify	3.4.2
console_shortcut	0.1.1
constantly	15.1.0
contourpy	1.0.5
cookiecutter	1.7.3
cryptography	41.0.3
cssselect	1.1.0
curl	8.1.1

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Package Name	win-64
cycler	0.11.0
cytoolz	0.12.0
daal4py	2023.1.1
dal	2023.1.1
dask	2023.6.0
dask-core	2023.6.0
datasets	2.12.0
datashader	0.15.2
datashape	0.5.4
dav1d	1.2.1
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.6
distributed	2023.6.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
filelock	3.9.0
flake8	6.0.0
flask	2.2.2
fmt	9.1.0
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.3.3
fsspec	2023.4.0
future	0.18.3
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
glib	2.69.1
glob2	0.7
glog	0.5.0
greenlet	2.0.1
grpc-cpp	1.48.2
h5py	3.9.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.17.1
huggingface_hub	0.15.1
hvplot	0.8.4
hyperlink	21.0.0
icc_rt	2022.1.0
icu	58.2
idna	3.4
imagecodecs	2023.1.23
imageio	2.26.0

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Package Name	win-64
imagesize	1.4.1
imbalanced-learn	0.10.1
importlib-metadata	6.0.0
importlib_metadata	6.0.0
incremental	21.3.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.25.0
ipython	8.15.0
ipython_genutils	0.2.0
ipywidgets	8.0.4
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.0.4
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	1.0.1
jinja2	3.1.2
jinja2-time	0.2.0
jmespath	0.10.0
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.32
jsonpointer	2.1
jsonschema	4.17.3
jupyter	1.0.0
jupyter_client	7.4.9
jupyter_console	6.6.3
jupyter_core	5.3.0
jupyter_events	0.6.3
jupyter_server	1.23.4
jupyter_server_fileid	0.9.0
jupyter_server_ydoc	0.8.0
jupyter_ydoc	0.2.4
jupyterlab	3.6.3
jupyterlab_pygments	0.1.2
jupyterlab_server	2.22.0
jupyterlab_widgets	3.0.5
kaleido-core	0.2.1
keyring	23.13.1
kiwisolver	1.4.4
krb5	1.20.1
lazy-object-proxy	1.6.0
lazy_loader	0.2

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Package Name	win-64
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libavif	0.11.1
libboost	1.82.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.1.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4
libiconv	1.16
liblief	0.12.3
libmamba	1.5.1
libmambapy	1.5.1
libpng	1.6.39
libpq	12.15
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.24
libspatialindex	1.9.3
libssh2	1.10.0
libthrift	0.15.0
libtiff	4.5.1
libwebp	1.3.2
libwebp-base	1.3.2
libxml2	2.10.4
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.40.0
locket	1.0.0
lxml	4.9.3
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.1
mathjax	2.7.5
matplotlib	3.7.2
matplotlib-base	3.7.2
matplotlib-inline	0.1.6

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Package Name	win-64
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	1.4.19
mistune	0.8.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.8
mkl_random	1.2.4
more-itertools	8.12.0
mpmath	1.3.0
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.2
multipledispatch	0.6.0
multiprocess	0.70.14
munkres	1.1.4
mypy_extensions	1.0.0
navigator-updater	0.4.0
nbclassic	0.5.5
nbclient	0.5.13
nbconvert	6.5.4
nbformat	5.9.2
nest-asyncio	1.5.6
networkx	3.1
nltk	3.8.1
notebook	6.5.4
notebook-shim	0.2.2
numba	0.57.1
numexpr	2.8.4
numpy	1.24.3
numpy-base	1.24.3
numpydoc	1.5.0
openjpeg	2.4.0
openpyxl	3.0.10
openssl	3.0.10
orc	1.7.4
packaging	23.1
pandas	2.0.3
pandocfilters	1.5.0
panel	1.2.3
param	1.13.0
paramiko	2.8.1
parsel	1.6.0
parso	0.8.3
partd	1.4.0
pathlib	1.0.1
pathspec	0.10.3
patsy	0.5.3
pcre	8.45

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Package Name	win-64
pcre2	10.42
pep8	1.7.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	9.4.0
pip	23.2.1
pkce	1.0.3
pkginfo	1.9.6
platformdirs	3.10.0
plotly	5.9.0
pluggy	1.0.0
ply	3.11
powershell_shortcut	0.0.1
poyo	0.5.0
prometheus_client	0.14.1
prompt-toolkit	3.0.36
prompt_toolkit	3.0.36
protego	0.1.16
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	8.0.0
py-lief	0.12.3
pyarrow	11.0.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	4
pycodestyle	2.10.0
pycosat	0.6.4
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydantic	1.10.8
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	2.3.0
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	4.0.34
pyopenssl	23.2.0
pyparsing	3.0.9
pyqt	5.15.7
pyqt5-sip	12.11.0
pyqtwebengine	5.15.7
pyrsistent	0.18.0

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Package Name	win-64
pysocks	1.7.1
pytables	3.8.0
pytest	7.4.0
python	3.11.5
python-dateutil	2.8.2
python-dotenv	0.21.0
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-kaleido	0.2.1
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	1.2.1
python-lsp-jsonrpc	1.0.0
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
python-tzdata	2023.3
python-xxhash	2.0.2
pytoolconfig	1.2.5
pytz	2023.3.post1
pyviz_comms	2.3.0
pywavelets	1.4.1
pywin32	305
pywin32-ctypes	0.2.0
pywinpty	2.0.10
pyyaml	6.0
pyzmq	23.2.0
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.2.0
qtwebkit	5.212
queuelib	1.5.0
re2	2022.04.01
regex	2022.7.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
requests-file	1.5.1
requests-toolbelt	1.0.0
responses	0.13.3
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rope	1.7.0
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21

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Package Name	win-64
s3fs	2023.4.0
safetensors	0.3.2
scikit-image	0.20.0
scikit-learn	1.3.0
scikit-learn-intelex	2023.1.1
scipy	1.11.1
scrapy	2.8.0
seaborn	0.12.2
send2trash	1.8.0
service_identity	18.1.0
setuptools	68.0.0
sip	6.6.2
six	1.16.0
smart_open	5.2.1
snappy	1.1.9
sniffio	1.2.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.4
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.5
spyder	5.4.3
spyder-kernels	2.4.4
sqlalchemy	1.4.39
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.14.0
sympy	1.11.1
tabulate	0.8.10
tbb	2021.8.0
tbb4py	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2023.4.12
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
tokenizers	0.13.2
toml	0.10.2
tomlkit	0.11.1

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Package Name	win-64
toolz	0.12.0
tornado	6.3.2
tqdm	4.65.0
traitlets	5.7.1
transformers	4.32.1
twisted	22.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.7.1
typing_extensions	4.7.1
tzdata	2023c
uc-micro-py	1.0.1
ujson	5.4.0
unidecode	1.2.0
urllib3	1.26.16
utf8proc	2.6.1
vc	14.2
vs2015_runtime	14.27.29016
w3lib	1.21.0
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	0.58.0
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.38.4
widgetsnbextension	4.0.5
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2023.6.0
xlwings	0.29.1
xxhash	0.8.0
xyzservices	2022.9.0
xz	5.4.2
y-py	0.5.9
yaml	0.2.5
yaml-cpp	0.7.0
yapf	0.31.0
yarl	1.8.1
ypy-websocket	0.8.2
zeromq	4.3.4
zfp	1.0.0
zict	2.2.0
zipp	3.11.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.19.0
zstd	1.5.5

Anaconda 2023.07-2 (Aug 04, 2023)

Python version: 3.11.4

User-facing Changes

- Conda has been updated to v23.7.2
- Jupyter_client and pyzmq have been downgraded to v7.4.9 and v23.2.0, respectively (see jupyter pull request 6749).

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07	2023.07	2023.07	2023.07	2023.07
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
abseil-cpp	20211102.0	20211102.0	20211102.0		20211102.0	202111
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0		22.1.0	22.1.0
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0		0.18.0	0.18.0
alabaster	0.7.12	0.7.12			0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.0	1.12.0	1.12.0	1.12.0	1.12.0	1.12.0
anaconda-navigator	2.4.2	2.4.2			2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices					0.3.0	0.3.0
appnope					0.1.2	0.1.2
appscript					1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3			1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0			1.4.0	1.4.0
attrs	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	1.6.0	1.6.0			1.6.0	1.6.0

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
aws-c-common	0.4.57	0.5.11	0.4.57		0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6	0.1.6		0.1.6	0.1.6
aws-checksums	0.1.9	0.1.11	0.1.9		0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185	1.8.185		1.8.185	1.8.185
babel	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post
bcrypt	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4			0.4.4	0.4.4
black	23.3.0	23.3.0			23.3.0	23.3.0
blas	1.0	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.2.1	2.4.3	3.2.1	2.4.3	3.2.1	3.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
boto3			1.24.28	1.24.28		1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05
cctools					949.0.1	949.0.1
cctools_osx-64						949.0.1
cctools_osx-arm64					949.0.1	
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.7.2	23.7.2	23.7.2	23.7.2	23.7.2	23.7.2
conda-build	3.26.0	3.26.0	3.26.0	3.26.0	3.26.0	3.26.0
conda-content-trust	0.1.1	0.1.1	0.1.3	0.1.1	0.1.1	0.1.1
conda-index	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.41	1.0.41			1.0.41	1.0.41
conda-token	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2
console_shortcut						
constantly	15.1.0	15.1.0	15.1.0		15.1.0	15.1.0
contourpy	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3			1.7.3	1.7.3
cryptography	41.0.2	41.0.2	39.0.1	41.0.2	41.0.2	41.0.2
cssselect	1.1.0	1.1.0	1.1.0		1.1.0	1.1.0
curl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1					
dal	2023.1.1					
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
datasets	2.12.0	2.12.0			2.12.0	
datashader	0.15.1	0.15.1	0.15.1		0.15.1	0.15.1
datashape	0.5.4	0.5.4	0.5.4		0.5.4	0.5.4
dbus	1.13.18	1.13.18				
debugpy	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713			20200713	202007
dill	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
docstring-to-markdown	0.11	0.11			0.11	0.11
docutils	0.18.1	0.18.1			0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9				
filelock	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0			6.0.0	6.0.0
flask	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1				
fonttools	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
future	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0		4.3.0	4.3.0
gettext					0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2		2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
glib	2.69.1	2.69.1			2.69.1	2.69.1
glob2	0.7	0.7	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0		0.5.0	0.5.0
gmp	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1		1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1			1.14.1	1.14.1
gstreamer	1.14.1	1.14.1			1.14.1	1.14.1
h5py	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6	1.12.1	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.17.0	1.17.0	1.17.0	1.14.8	1.17.0	1.17.0
huggingface_hub	0.15.1	0.15.1			0.15.1	
hvplot	0.8.4	0.8.4	0.8.4	0.7.3	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt						
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.
imageio	2.31.1	2.31.1	2.31.1	2.26.0	2.31.1	2.31.1
imagesize	1.4.1	1.4.1			1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0			6.0.0	6.0.0
incremental	21.3.0	21.3.0	21.3.0		21.3.0	21.3.0
inflection	0.5.1	0.5.1			0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0					
intervaltree	3.1.0	3.1.0			3.1.0	3.1.0
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.0.4	1.0.4	1.0.4		1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1			3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1				
jellyfish	0.9.0	0.9.0			0.9.0	0.9.0
jinja2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0			0.2.0	0.2.0
jmespath	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e	9e	9e
jq	1.6	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9	7.4.9	7.4.9	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3		0.6.3	0.6.3
jupyter_server	1.23.4	1.23.4	1.23.4	1.23.4	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0		0.9.0	0.9.0
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0		0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4	0.2.4		0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1			23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1	0.2	0.2
lcms2	2.12	2.12	2.12	2.12	2.12	2.12
ld64					530	530
ld64_osx-64						530
ld64_osx-arm64					530	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
ldid					2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	10.0.1			12.0.0	12.0.0
libclang13						
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12		2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran					5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0		

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1	10.0.1				
libllvm12					12.0.0	12.0.0
libllvm14	14.0.6	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libogg						
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.15			12.15	12.15
libprotobuf	3.20.3	3.20.3	3.20.3		3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3			1.9.3	1.9.3
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0		0.13.0	0.15.0
libtiff	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libuv					1.44.2	
libvorbis						
libwebp	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libxcb	1.15	1.15				
libxkbcommon	1.0.1	1.0.1				
libxml2	2.9.14	2.9.14	2.10.3	2.10.3	2.10.3	2.10.3
libxslt	1.1.35	1.1.35	1.1.37	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0		2.0.0	2.0.0
llvm-openmp					14.0.6	14.0.6
llvmlite	0.40.0	0.40.0	0.40.0		0.40.0	0.40.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.1	4.9.2	4.9.2	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10	2.10	2.10
m2-msys2-runtime						
m2-patch						
m2w64-libwinpthread-git						
markdown	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0		2.2.0	2.2.0
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
mdit-py-plugins	0.3.0		0.3.0		0.3.0	0.3.0
mdurl	0.1.0		0.1.0		0.1.0	0.1.0
menuinst						
mistune	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0					
mkl-service	2.4.0					
mkl_fft	1.3.6					
mkl_random	1.2.2					
mock				4.0.3		
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0					
mpich	4.1.1					
mpmath	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch						
multidict	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0		0.6.0	0.6.0
multiprocess	0.70.14	0.70.14			0.70.14	
munkres	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3			0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0			0.4.0	0.4.0
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
networkx	3.1	3.1	3.1	3.1	3.1	3.1
ninja	1.10.2	1.10.2			1.10.2	
ninja-base	1.10.2	1.10.2			1.10.2	
nltk	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1	3.8.1
notebook	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35			4.35	4.35
nss	3.89.1	3.89.1			3.89.1	3.89.1
numba	0.57.0	0.57.0	0.57.0		0.57.0	0.57.0
numexpr	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0			1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4		1.7.4	1.7.4
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
panel	1.2.1	0.14.3	1.2.1	0.12.6	1.2.1	1.2.1
param	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0
paramiko						
parsel	1.6.0	1.6.0	1.6.0		1.6.0	1.6.0
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2		
pathlib	1.0.1	1.0.1			1.0.1	1.0.1
pathspec	0.10.3	0.10.3			0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45			8.45	8.45
pcre2	10.37	10.37	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11			3.11	3.11
pooch	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
powershell_shortcut						
poyo	0.5.0	0.5.0			0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16		0.1.16	0.1.16
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0		8.0.0	8.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
pyasn1	0.4.8	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	4	4	4	4	4	4
pycodestyle	2.10.0	2.10.0			2.10.0	2.10.0
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0			6.3.0	6.3.0
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0			2.4.0	2.4.0

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0			2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0			0.4.0	0.4.0
pynacl						
pyobjc-core					9.0	9.0
pyobjc-framework-cocoa					9.0	9.0
pyobjc-framework-coreservices					9.0	9.0
pyobjc-framework-fsevents					9.0	9.0
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7			5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0			12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7			5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0	3.8.0	3.8.0
pytest	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0	7.4.0
python	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
python-libarchive-c	2.9	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1			1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0			1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2			1.7.2	1.7.2
python-slugify	5.0.2	5.0.2			5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2			2.0.2	
python.app					3	3
pytoolconfig	1.2.5	1.2.5			1.2.5	1.2.5
pytorch	2.0.1	2.0.1			2.0.1	
pytz	2022.7	2022.7	2022.7	2022.7	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
pywin32						
pywin32-ctypes						
pywinpty						
pyxdg	0.27	0.27				
pyyaml	6.0	6.0	6.0	6.0	6.0	6.0
pyzmq	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2			3.0.2	3.0.2
qstylizer	0.2.2	0.2.2			0.2.2	0.2.2
qt-main	5.15.2	5.15.2			5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9			5.15.9	5.15.9
qtawesome	1.2.2	1.2.2			1.2.2	1.2.2
qtconsole	5.4.2	5.4.2			5.4.2	5.4.2
qtpy	2.2.0	2.2.0			2.2.0	2.2.0
qtwebkit	5.212	5.212			5.212	5.212

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
queuelib	1.5.0	1.5.0	1.5.0		1.5.0	1.5.0
re2	2022.04.01	2022.04.01	2022.04.01		2022.04.01	2022.04
readline	8.2	8.2	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
responses	0.13.3	0.13.3			0.13.3	
rfc3339-validator	0.1.4	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1	0.1.1		0.1.1	0.1.1
rope	1.7.0	1.7.0			1.7.0	1.7.0
rtree	1.0.1	1.0.1			1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
s3transfer			0.6.0	0.6.0		0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0	1.3.0	1.2.2	1.3.0	1.3.0
scikit-learn-intelex	2023.1.1					
scipy	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
seaborn	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1				
send2trash	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0
sip	6.6.2	6.6.2			6.6.2	6.6.2
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sleef					3.5.1	
smart_open	5.2.1	5.2.1	5.2.1		5.2.1	5.2.1
snappy	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2			5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0			2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1			1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3			1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5			1.1.5	1.1.5
spyder	5.4.3	5.4.3			5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3			2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
statsmodels	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0	0.14.0
sympy	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10
tapi					1100.0.11	1000.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3			1.3	1.3
textdistance	4.2.1	4.2.1			4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1			0.1.1	0.1.1
tifffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
tokenizers	0.13.2	0.13.2			0.13.2	
toml	0.10.2	0.10.2			0.10.2	0.10.2
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.3.2	6.3.2	6.3.2	6.3.2	6.3.2	6.3.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1	4.29.2	2.1.1
twisted	22.10.0	22.10.0	22.10.0		22.10.0	22.10.0
twisted-iocpsupport						
typing-extensions	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1	4.7.1
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1		1.0.1	1.0.1
ujson	5.4.0	5.4.0			5.4.0	5.4.0
unidecode	1.2.0	1.2.0			1.2.0	1.2.0
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1		2.6.1	2.6.1
vc						
vs2015_runtime						
w3lib	1.21.0	1.21.0	1.21.0		1.21.0	1.21.0
watchdog	2.1.6	2.1.6			2.1.6	2.1.6
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2			1.0.2	1.0.2
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5
win_inet_pton						
winpty						
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1

Table 17 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
wurlitzer	3.0.2	3.0.2			3.0.2	3.0.2
xarray	2023.6.0	2023.6.0	2023.6.0		2023.6.0	2023.6.
xlwings					0.29.1	0.29.1
xxhash	0.8.0	0.8.0			0.8.0	
xyzservices	2022.9.0		2022.9.0		2022.9.0	2022.9.
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9		0.5.9	0.5.9
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0			0.31.0	0.31.0
yarl	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2		0.8.2	0.8.2
zeromq	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5		0.5.5	0.5.5
zict	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
zope	1.0	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_anaconda_depends	2023.07	2023.07	2023.07	2023.07
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	20211102.0	
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0	
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0	
alabaster	0.7.12	0.7.12		
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.12.0	1.12.0	1.12.0	1.12.0
anaconda-navigator	2.4.2	2.4.2		
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3		
arrow-cpp	11.0.0	11.0.0	11.0.0	
astroid	2.14.2	2.14.2	2.14.2	2.14.2

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Table 18 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
astropy	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0		
attrs	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0	
autopep8	1.6.0	1.6.0		
aws-c-common	0.4.57	0.5.11	0.4.57	
aws-c-event-stream	0.1.6	0.1.6	0.1.6	
aws-checksums	0.1.9	0.1.11	0.1.9	
aws-sdk-cpp	1.8.185	1.8.185	1.8.185	
babel	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0	3.2.0	
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4		
black	23.3.0	23.3.0		
blas	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.2.1	2.4.3	3.2.1	2.4.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.73.0	
boto3			1.24.28	1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0	
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2

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Table 18 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
conda	23.7.2	23.7.2	23.7.2	23.7.2
conda-build	3.26.0	3.26.0	3.26.0	3.26.0
conda-content-trust	0.1.1	0.1.1	0.1.3	0.1.1
conda-index	0.2.3	0.2.3	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0
conda-repo-cli	1.0.41	1.0.41		
conda-token	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2
constantly	15.1.0	15.1.0	15.1.0	
contourpy	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3		
cryptography	41.0.2	41.0.2	39.0.1	41.0.2
cssselect	1.1.0	1.1.0	1.1.0	
curl	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1			
dal	2023.1.1			
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0
datasets	2.12.0	2.12.0		
datashader	0.15.1	0.15.1	0.15.1	
datashape	0.5.4	0.5.4	0.5.4	
dbus	1.13.18	1.13.18		
debugpy	1.6.7	1.6.7	1.6.7	1.6.7
decorator	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		
dill	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11		
docutils	0.18.1	0.18.1		
entrypoints	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9		
filelock	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0		
flask	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1		
fonttools	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0
future	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0	

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
gflags	2.2.2	2.2.2	2.2.2	
giflib	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1		
glob2	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0	
gmp	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1	
gst-plugins-base	1.14.1	1.14.1		
gstreamer	1.14.1	1.14.1		
h5py	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.17.0	1.17.0	1.17.0	1.14.8
huggingface_hub	0.15.1	0.15.1		
hvplot	0.8.4	0.8.4	0.8.4	0.7.3
hyperlink	21.0.0	21.0.0	21.0.0	
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1	2.31.1	2.26.0
imagesize	1.4.1	1.4.1		
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0		
incremental	21.3.0	21.3.0	21.3.0	
inflection	0.5.1	0.5.1		
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0			
intervaltree	3.1.0	3.1.0		
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0	
itemloaders	1.0.4	1.0.4	1.0.4	
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1		
jedi	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1		
jellyfish	0.9.0	0.9.0		
jinja2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0		
jmespath	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e
jq	1.6	1.6	1.6	

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
json5	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3	
jupyter_server	1.23.4	1.23.4	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0	
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0	
jupyter_ydoc	0.2.4	0.2.4	0.2.4	
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1		
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.20.1	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1
lcms2	2.12	2.12	2.12	2.12
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
lerc	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0	
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	10.0.1		
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libdeflate	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
liblief	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1	10.0.1		
libllvm14	14.0.6	14.0.6	14.0.6	
libmamba	1.4.1	1.4.1	1.4.1	1.4.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libopenblas		0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.15		
libprotobuf	3.20.3	3.20.3	3.20.3	
libsodium	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3		
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0	
libtiff	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libwebp	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4
libxcb	1.15	1.15		
libxkbcommon	1.0.1	1.0.1		
libxml2	2.9.14	2.9.14	2.10.3	2.10.3
libxslt	1.1.35	1.1.35	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0	
llvmlite	0.40.0	0.40.0	0.40.0	
locket	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.1	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10
markdown	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0	
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0		0.3.0	
mdurl	0.1.0		0.1.0	
mistune	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0			
mkl-service	2.4.0			
mkl_fft	1.3.6			
mkl_random	1.2.2			
mock				4.0.3
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0			
mpich	4.1.1			
mpmath	1.3.0	1.3.0	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
multidict	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0	
multiprocess	0.70.14	0.70.14		
munkres	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3		
navigator-updater	0.4.0	0.4.0		
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6
networkx	3.1	3.1	3.1	3.1
ninja	1.10.2	1.10.2		
ninja-base	1.10.2	1.10.2		
nltk	3.8.1	3.8.1	3.8.1	3.8.1
notebook	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35		
nss	3.89.1	3.89.1		
numba	0.57.0	0.57.0	0.57.0	
numexpr	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0
numpydoc	1.5.0	1.5.0		
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4	
packaging	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.2.1	0.14.3	1.2.1	0.12.6
param	1.13.0	1.13.0	1.13.0	1.13.0
parsel	1.6.0	1.6.0	1.6.0	
parso	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2
pathlib	1.0.1	1.0.1		
pathspec	0.10.3	0.10.3		
patsy	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45		
pcre2	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.2.1	23.2.1	23.2.1	23.2.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		
pooch	1.4.0	1.4.0	1.4.0	1.4.0
poyo	0.5.0	0.5.0		
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16	
psutil	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0	
py-lief	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0	
pyasn1	0.4.8	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	0.2.8	
pybind11-abi	4	4	4	4
pycodestyle	2.10.0	2.10.0		
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0		
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0		
pylint	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0		
pyls-spyder	0.4.0	0.4.0		
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7		
pyqt5-sip	12.11.0	12.11.0		
pyqtwebengine	5.15.7	5.15.7		
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0
pytest	7.4.0	7.4.0	7.4.0	7.4.0
python	3.11.4	3.11.4	3.11.4	3.11.4
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7	
python-libarchive-c	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
python-lsp-black	1.2.1	1.2.1		
python-lsp-jsonrpc	1.0.0	1.0.0		
python-lsp-server	1.7.2	1.7.2		
python-slugify	5.0.2	5.0.2		
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2		
pytoolconfig	1.2.5	1.2.5		
pytorch	2.0.1	2.0.1		
pytz	2022.7	2022.7	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1
pyxdg	0.27	0.27		
pyyaml	6.0	6.0	6.0	6.0
pyzmq	23.2.0	23.2.0	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2		
qstylizer	0.2.2	0.2.2		
qt-main	5.15.2	5.15.2		
qt-webengine	5.15.9	5.15.9		
qtawesome	1.2.2	1.2.2		
qtconsole	5.4.2	5.4.2		
qtpy	2.2.0	2.2.0		
qtwebkit	5.212	5.212		
queuelib	1.5.0	1.5.0	1.5.0	
re2	2022.04.01	2022.04.01	2022.04.01	
readline	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0
requests-file	1.5.1	1.5.1	1.5.1	
requests-toolbelt	1.0.0	1.0.0	1.0.0	1.0.0
responses	0.13.3	0.13.3		
rfc3339-validator	0.1.4	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	0.1.1	
rope	1.7.0	1.7.0		
rtree	1.0.1	1.0.1		
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0
s3transfer			0.6.0	0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0	1.3.0	1.2.2
scikit-learn-intelex	2023.1.1			
scipy	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0	
seaborn	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1		
send2trash	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0	

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
setuptools	68.0.0	68.0.0	68.0.0	68.0.0
sip	6.6.2	6.6.2		
six	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	5.2.1	
snappy	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2		
sphinxcontrib-applehelp	1.0.2	1.0.2		
sphinxcontrib-devhelp	1.0.2	1.0.2		
sphinxcontrib-htmlhelp	2.0.0	2.0.0		
sphinxcontrib-jsmath	1.0.1	1.0.1		
sphinxcontrib-qthelp	1.0.3	1.0.3		
sphinxcontrib-serializinghtml	1.1.5	1.1.5		
spyder	5.4.3	5.4.3		
spyder-kernels	2.4.3	2.4.3		
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0	0.14.0	0.14.0
sympy	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3		
textdistance	4.2.1	4.2.1		
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		
tiffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0	
tokenizers	0.13.2	0.13.2		
toml	0.10.2	0.10.2		
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.3.2	6.3.2	6.3.2	6.3.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1
twisted	22.10.0	22.10.0	22.10.0	
typing-extensions	4.7.1	4.7.1	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1	4.7.1	4.7.1
tzdata	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1	

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
ujson	5.4.0	5.4.0		
unidecode	1.2.0	1.2.0		
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1	
w3lib	1.21.0	1.21.0	1.21.0	
watchdog	2.1.6	2.1.6		
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2		
wheel	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5
wrapt	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		
xarray	2023.6.0	2023.6.0	2023.6.0	
xxhash	0.8.0	0.8.0		
xyzservices	2022.9.0		2022.9.0	
xz	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9	
yaml	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0		
yarl	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2	
zeromq	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5	
zict	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7	
zope	1.0	1.0	1.0	
zope.interface	5.4.0	5.4.0	5.4.0	
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07
abseil-cpp	20211102.0	20211102.0
aiobotocore	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0
aiohttp	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0

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Package Name	osx-arm64	osx-64
alabaster	0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.12.0	1.12.0
anaconda-navigator	2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1
anyio	3.5.0	3.5.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.2	0.1.2
appscript	1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0
astroid	2.14.2	2.14.2
astropy	5.1	5.1
asttokens	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0
attrs	22.1.0	22.1.0
automat	20.2.0	20.2.0
autopep8	1.6.0	1.6.0
aws-c-common	0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6
aws-checksums	0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185
babel	2.11.0	2.11.0
backcall	0.2.0	0.2.0
backports	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4
backports.tempfile	1.0	1.0
backports.weakref	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4
black	23.3.0	23.3.0
blas	1.0	1.0
bleach	4.1.0	4.1.0
blosc	1.21.3	1.21.3
bokeh	3.2.1	3.2.1
boltons	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0
boto3		1.24.28
botocore	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8

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Package Name	osx-arm64	osx-64
c-ares	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1
clyent	1.2.2	1.2.2
colorama	0.4.6	0.4.6
colorcet	3.0.1	3.0.1
comm	0.1.2	0.1.2
conda	23.7.2	23.7.2
conda-build	3.26.0	3.26.0
conda-content-trust	0.1.1	0.1.1
conda-index	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
conda-repo-cli	1.0.41	1.0.41
conda-token	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2
constantly	15.1.0	15.1.0
contourpy	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3
cryptography	41.0.2	41.0.2
cssselect	1.1.0	1.1.0
curl	8.1.1	8.1.1
cycler	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0
dask	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.6.0
datasets	2.12.0	
datashader	0.15.1	0.15.1
datashape	0.5.4	0.5.4
debugpy	1.6.7	1.6.7
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.6	0.3.6
distributed	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1

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Package Name	osx-arm64	osx-64
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
filelock	3.9.0	3.9.0
flake8	6.0.0	6.0.0
flask	2.2.2	2.2.2
fmt	9.1.0	9.1.0
fonttools	4.25.0	4.25.0
freetype	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3
fsspec	2023.4.0	2023.3.0
future	0.18.3	0.18.3
gensim	4.3.0	4.3.0
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
glib	2.69.1	2.69.1
glob2	0.7	0.7
glog	0.5.0	0.5.0
gmp	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
h5py	3.7.0	3.7.0
hdf5	1.12.1	1.10.6
heapdict	1.0.1	1.0.1
holoviews	1.17.0	1.17.0
huggingface_hub	0.15.1	
hvplot	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0
icu	68.1	58.2
idna	3.4	3.4
imagecodecs	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0
incremental	21.3.0	21.3.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.6.8	0.6.8
intervaltree	3.1.0	3.1.0
ipykernel	6.19.2	6.19.2
ipython	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4
isort	5.9.3	5.9.3

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Package Name	osx-arm64	osx-64
itemadapter	0.3.0	0.3.0
itemloaders	1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	0.9.0	0.9.0
jinja2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0
jmespath	0.10.0	0.10.0
joblib	1.2.0	1.2.0
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
jsonschema	4.17.3	4.17.3
jupyter	1.0.0	1.0.0
jupyter_client	7.4.9	7.4.9
jupyter_console	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3
jupyter_server	1.23.4	1.23.4
jupyter_server_fileid	0.9.0	0.9.0
jupyter_server_ydoc	0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5
jxrlib	1.1	1.1
keyring	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4
krb5	1.20.1	1.20.1
lazy-object-proxy	1.6.0	1.6.0
lazy_loader	0.2	0.2
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libboost	1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	12.0.0	12.0.0
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6

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Package Name	osx-arm64	osx-64
libdeflate	1.17	1.17
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm12	12.0.0	12.0.0
libllvm14	14.0.6	14.0.6
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.15	12.15
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3
libssh2	1.10.0	1.10.0
libthrift	0.13.0	0.15.0
libtiff	4.5.0	4.5.0
libuv	1.44.2	
libwebp	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4
libxml2	2.10.3	2.10.3
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.40.0	0.40.0
locket	1.0.0	1.0.0
lxml	4.9.2	4.9.2
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
mistune	0.8.4	0.8.4
more-itertools	8.12.0	8.12.0
mpc	1.1.0	1.1.0

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Package Name	osx-arm64	osx-64
mpfr	4.0.2	4.0.2
mpmath	1.3.0	1.3.0
msgpack-python	1.0.3	1.0.3
multidict	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0
multiprocess	0.70.14	
munkres	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0
nbclassic	0.5.5	0.5.5
nbclient	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4
nbformat	5.7.0	5.7.0
ncurses	6.4	6.4
nest-asyncio	1.5.6	1.5.6
networkx	3.1	3.1
ninja	1.10.2	
ninja-base	1.10.2	
nltk	3.8.1	3.8.1
notebook	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2
nspr	4.35	4.35
nss	3.89.1	3.89.1
numba	0.57.0	0.57.0
numexpr	2.8.4	2.8.4
numpy	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u
orc	1.7.4	1.7.4
packaging	23.0	23.0
pandas	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0
panel	1.2.1	1.2.1
param	1.13.0	1.13.0
parsel	1.6.0	1.6.0
parso	0.8.3	0.8.3
partd	1.2.0	1.2.0
patch	2.7.6	2.7.6
pathlib	1.0.1	1.0.1
pathspec	0.10.3	0.10.3
patsy	0.5.3	0.5.3
pcre	8.45	8.45
pcre2	10.37	10.37
pep8	1.7.1	1.7.1
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5

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Package Name	osx-arm64	osx-64
pillow	9.4.0	9.4.0
pip	23.2.1	23.2.1
pkginfo	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2
plotly	5.9.0	5.9.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11
pooch	1.4.0	1.4.0
poyo	0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36
protego	0.1.16	0.1.16
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0
py-lief	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	4	4
pycodestyle	2.10.0	2.10.0
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1
pygments	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0
pylint	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0
pyobjc-core	9.0	9.0
pyobjc-framework-cocoa	9.0	9.0
pyobjc-framework-coreservices	9.0	9.0
pyobjc-framework-fsevents	9.0	9.0
pyodbc	4.0.34	4.0.34
pyopenssl	23.2.0	23.2.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0
pysocks	1.7.1	1.7.1
pytables	3.8.0	3.8.0
pytest	7.4.0	7.4.0

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Package Name	osx-arm64	osx-64
python	3.11.4	3.11.4
python-dateutil	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-xxhash	2.0.2	
python.app	3	3
pytoolconfig	1.2.5	1.2.5
pytorch	2.0.1	
pytz	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1
pyyaml	6.0	6.0
pyzmq	23.2.0	23.2.0
qdarkstyle	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2
qtpy	2.2.0	2.2.0
qtwebkit	5.212	5.212
queuelib	1.5.0	1.5.0
re2	2022.04.01	2022.04.01
readline	8.2	8.2
regex	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
requests-file	1.5.1	1.5.1
requests-toolbelt	1.0.0	1.0.0
responses	0.13.3	
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rope	1.7.0	1.7.0
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2023.4.0	2023.3.0
s3transfer		0.6.0
sacremoses	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0
scikit-learn	1.3.0	1.3.0
scipy	1.10.1	1.10.1

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Package Name	osx-arm64	osx-64
scrapy	2.8.0	2.8.0
seaborn	0.12.2	0.12.2
send2trash	1.8.0	1.8.0
service_identity	18.1.0	18.1.0
setuptools	68.0.0	68.0.0
sip	6.6.2	6.6.2
six	1.16.0	1.16.0
sleef	3.5.1	
smart_open	5.2.1	5.2.1
snappy	1.1.9	1.1.9
sniffio	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.4	2.4
sphinx	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5
spyder	5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39
sqlite	3.41.2	3.41.2
stack_data	0.2.0	0.2.0
statsmodels	0.14.0	0.14.0
sympy	1.11.1	1.11.1
tabulate	0.8.10	0.8.10
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0
three-merge	0.1.1	0.1.1
tiffile	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1
tk	8.6.12	8.6.12
tldextract	3.2.0	3.2.0
tokenizers	0.13.2	
toml	0.10.2	0.10.2
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.3.2	6.3.2
tqdm	4.65.0	4.65.0
traitlets	5.7.1	5.7.1

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Table 19 – continued from previous page

Package Name	osx-arm64	osx-64
transformers	4.29.2	2.1.1
twisted	22.10.0	22.10.0
typing-extensions	4.7.1	4.7.1
typing_extensions	4.7.1	4.7.1
tzdata	2023c	2023c
uc-micro-py	1.0.1	1.0.1
ujson	5.4.0	5.4.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1
w3lib	1.21.0	1.21.0
watchdog	2.1.6	2.1.6
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2
wheel	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2023.6.0	2023.6.0
xlwings	0.29.1	0.29.1
xxhash	0.8.0	
xyzservices	2022.9.0	2022.9.0
xz	5.4.2	5.4.2
y-py	0.5.9	0.5.9
yaml	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0
yapf	0.31.0	0.31.0
yarl	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2
zeromq	4.3.4	4.3.4
zfp	0.5.5	0.5.5
zict	2.2.0	2.2.0
zipp	3.11.0	3.11.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2023.07
abseil-cpp	20211102.0
aiobotocore	2.4.2
aiofiles	22.1.0
aiohttp	3.8.3
aioitertools	0.7.1
aiosignal	1.2.0
aiosqlite	0.18.0
alabaster	0.7.12
anaconda-catalogs	0.2.0
anaconda-client	1.12.0
anaconda-navigator	2.4.2
anaconda-project	0.11.1
anyio	3.5.0
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	11.0.0
astroid	2.14.2
astropy	5.1
asttokens	2.0.5
async-timeout	4.0.2
atomicwrites	1.4.0
attrs	22.1.0
automat	20.2.0
autopep8	1.6.0
aws-c-common	0.4.57
aws-c-event-stream	0.1.6
aws-checksums	0.1.9
aws-sdk-cpp	1.8.185
babel	2.11.0
backcall	0.2.0
backports	1.1
backports.functools_lru_cache	1.6.4
backports.tempfile	1.0
backports.weakref	1.0.post1
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	23.3.0
blas	1.0
bleach	4.1.0
blosc	1.21.3
bokeh	3.2.1
boltons	23.0.0
boost-cpp	1.73.0
boto3	1.24.28
botocore	1.27.59

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Table 20 – continued from previous page

Package Name	win-64
bottleneck	1.3.5
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
bzip2	1.0.8
c-ares	1.19.0
c-blosc2	2.8.0
ca-certificates	2023.05.30
certifi	2023.7.22
cffi	1.15.1
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.0.4
cloudpickle	2.2.1
clyent	1.2.2
colorama	0.4.6
colorcet	3.0.1
comm	0.1.2
conda	23.7.2
conda-build	3.26.0
conda-content-trust	0.1.1
conda-index	0.2.3
conda-libmamba-solver	23.5.0
conda-pack	0.6.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
conda-repo-cli	1.0.41
conda-token	0.4.0
conda-verify	3.4.2
console_shortcut	0.1.1
constantly	15.1.0
contourpy	1.0.5
cookiecutter	1.7.3
cryptography	41.0.2
cssselect	1.1.0
curl	8.1.1
cycler	0.11.0
cytoolz	0.12.0
daal4py	2023.1.1
dal	2023.1.1
dask	2023.6.0
dask-core	2023.6.0
datashader	0.15.1
datashape	0.5.4
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713

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Table 20 – continued from previous page

Package Name	win-64
dill	0.3.6
distributed	2023.6.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
filelock	3.9.0
flake8	6.0.0
flask	2.2.2
fmt	9.1.0
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.3.3
fsspec	2023.3.0
future	0.18.3
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
glib	2.69.1
glob2	0.7
glog	0.5.0
greenlet	2.0.1
gst-plugins-base	1.18.5
gstreamer	1.18.5
h5py	3.7.0
hdf5	1.10.6
heapdict	1.0.1
holoviews	1.17.0
hvplot	0.8.4
hyperlink	21.0.0
icc_rt	2022.1.0
icu	58.2
idna	3.4
imagecodecs	2021.8.26
imageio	2.26.0
imagesize	1.4.1
imbalanced-learn	0.10.1
importlib-metadata	6.0.0
importlib_metadata	6.0.0
incremental	21.3.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.19.2
ipython	8.12.0
ipython_genutils	0.2.0
ipywidgets	8.0.4

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Table 20 – continued from previous page

Package Name	win-64
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.0.4
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	0.9.0
jinja2	3.1.2
jinja2-time	0.2.0
jmespath	0.10.0
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.32
jsonpointer	2.1
jsonschema	4.17.3
jupyter	1.0.0
jupyter_client	7.4.9
jupyter_console	6.6.3
jupyter_core	5.3.0
jupyter_events	0.6.3
jupyter_server	1.23.4
jupyter_server_fileid	0.9.0
jupyter_server_ydoc	0.8.0
jupyter_ydoc	0.2.4
jupyterlab	3.6.3
jupyterlab_pygments	0.1.2
jupyterlab_server	2.22.0
jupyterlab_widgets	3.0.5
jxrlib	1.1
keyring	23.13.1
kiwisolver	1.4.4
krb5	1.19.4
lazy-object-proxy	1.6.0
lazy_loader	0.2
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libboost	1.73.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.1.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4

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Table 20 – continued from previous page

Package Name	win-64
libiconv	1.16
liblief	0.12.3
libllvm14	14.0.6
libmamba	1.4.1
libmambapy	1.4.1
libogg	1.3.5
libpng	1.6.39
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.22
libspatialindex	1.9.3
libssh2	1.10.0
libthrift	0.15.0
libtiff	4.5.0
libvorbis	1.3.7
libwebp	1.2.4
libwebp-base	1.2.4
libxml2	2.10.3
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.40.0
locket	1.0.0
lxml	4.9.2
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.1
matplotlib	3.7.1
matplotlib-base	3.7.1
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	1.4.19
mistune	0.8.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.6
mkl_random	1.2.2
more-itertools	8.12.0
mpmath	1.3.0
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.2

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Table 20 – continued from previous page

Package Name	win-64
multipledispatch	0.6.0
munkres	1.1.4
mypy_extensions	0.4.3
navigator-updater	0.4.0
nbclassic	0.5.5
nbclient	0.5.13
nbconvert	6.5.4
nbformat	5.7.0
nest-asyncio	1.5.6
networkx	3.1
nltk	3.8.1
notebook	6.5.4
notebook-shim	0.2.2
numba	0.57.0
numexpr	2.8.4
numpy	1.24.3
numpy-base	1.24.3
numpydoc	1.5.0
openjpeg	2.4.0
openpyxl	3.0.10
openssl	1.1.1u
orc	1.7.4
packaging	23.0
pandas	1.5.3
pandocfilters	1.5.0
panel	1.2.1
param	1.13.0
paramiko	2.8.1
parsel	1.6.0
parso	0.8.3
partd	1.2.0
pathlib	1.0.1
pathspec	0.10.3
patsy	0.5.3
pcre	8.45
pcre2	10.37
pep8	1.7.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	9.4.0
pip	23.2.1
pkginfo	1.9.6
platformdirs	2.5.2
plotly	5.9.0
pluggy	1.0.0
ply	3.11
pooch	1.4.0
powershell_shortcut	0.0.1
poyo	0.5.0
prometheus_client	0.14.1

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Table 20 – continued from previous page

Package Name	win-64
prompt-toolkit	3.0.36
prompt_toolkit	3.0.36
protego	0.1.16
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	8.0.0
py-lief	0.12.3
pyarrow	11.0.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	4
pycodestyle	2.10.0
pycosat	0.6.4
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	2.3.0
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	4.0.34
pyopenssl	23.2.0
pyparsing	3.0.9
pyqt	5.15.7
pyqt5-sip	12.11.0
pyqtwebengine	5.15.7
pyrsistent	0.18.0
pysocks	1.7.1
pytables	3.8.0
pytest	7.4.0
python	3.11.4
python-dateutil	2.8.2
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	1.2.1
python-lsp-jsonrpc	1.0.0
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
pytoolconfig	1.2.5
pytz	2022.7

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Table 20 – continued from previous page

Package Name	win-64
pyviz_comms	2.3.0
pywavelets	1.4.1
pywin32	305
pywin32-ctypes	0.2.0
pywinpty	2.0.10
pyyaml	6.0
pyzmq	23.2.0
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.2.0
qtwebkit	5.212
queuelib	1.5.0
re2	2022.04.01
regex	2022.7.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
requests-file	1.5.1
requests-toolbelt	1.0.0
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rope	1.7.0
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21
s3fs	2023.3.0
s3transfer	0.6.0
sacremoses	0.0.43
scikit-image	0.20.0
scikit-learn	1.3.0
scikit-learn-intelex	2023.1.1
scipy	1.10.1
scrapy	2.8.0
seaborn	0.12.2
send2trash	1.8.0
service_identity	18.1.0
setuptools	68.0.0
sip	6.6.2
six	1.16.0
smart_open	5.2.1
snappy	1.1.9
sniffio	1.2.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.4
sphinx	5.0.2

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Table 20 – continued from previous page

Package Name	win-64
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.5
spyder	5.4.3
spyder-kernels	2.4.3
sqlalchemy	1.4.39
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.14.0
sympy	1.11.1
tabulate	0.8.10
tbb	2021.8.0
tbb4py	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2021.7.2
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
toml	0.10.2
tomlkit	0.11.1
toolz	0.12.0
tornado	6.3.2
tqdm	4.65.0
traitlets	5.7.1
transformers	2.1.1
twisted	22.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.7.1
typing_extensions	4.7.1
tzdata	2023c
uc-micro-py	1.0.1
ujson	5.4.0
unidecode	1.2.0
urllib3	1.26.16
utf8proc	2.6.1
vc	14.2
vs2015_runtime	14.27.29016
w3lib	1.21.0
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1

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Table 20 – continued from previous page

Package Name	win-64
websocket-client	0.58.0
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.38.4
widgetsnbextension	4.0.5
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2023.6.0
xlwings	0.29.1
xyzservices	2022.9.0
xz	5.4.2
y-py	0.5.9
yaml	0.2.5
yaml-cpp	0.7.0
yapf	0.31.0
yarl	1.8.1
ypy-websocket	0.8.2
zeromq	4.3.4
zfp	0.5.5
zict	2.2.0
zipp	3.11.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.19.0
zstd	1.5.5

Anaconda 2023.07-1 (Jul 13, 2023)

Python version: 3.11.3

User-facing Changes

- Conda has been updated to v23.5.2 (conda issues 12873 and 12836).

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07	2023.07	2023.07	2023.07	2023.07

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
abseil-cpp	20211102.0	20211102.0	20211102.0		20211102.0	202111
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0		22.1.0	22.1.0
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0		0.18.0	0.18.0
alabaster	0.7.12	0.7.12			0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3	1.11.3	1.11.3	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2			2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices					0.3.0	0.3.0
appnope					0.1.2	0.1.2
appscript					1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3			1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0			1.4.0	1.4.0
attrs	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	1.6.0	1.6.0			1.6.0	1.6.0
aws-c-common	0.4.57	0.5.11	0.4.57		0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6	0.1.6		0.1.6	0.1.6
aws-checksums	0.1.9	0.1.11	0.1.9		0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185	1.8.185		1.8.185	1.8.185
babel	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post
bcrypt	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4			0.4.4	0.4.4
black	23.3.0	23.3.0			23.3.0	23.3.0
blas	1.0	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.1.1	2.4.3	3.1.1	2.4.3	3.1.1	3.1.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
boost-cpp	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
boto3			1.24.28	1.24.28		1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05
cctools					949.0.1	949.0.1
cctools_osx-64						949.0.1
cctools_osx-arm64					949.0.1	
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.5.2	23.5.2	23.5.2	23.5.2	23.5.2	23.5.2
conda-build	3.25.0	3.25.0	3.25.0	3.25.0	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3
conda-index	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41			1.0.41	1.0.41
conda-token	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2
console_shortcut						
constantly	15.1.0	15.1.0	15.1.0		15.1.0	15.1.0
contourpy	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3			1.7.3	1.7.3
cryptography	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1
cssselect	1.1.0	1.1.0	1.1.0		1.1.0	1.1.0
curl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1					
dal	2023.1.1					
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
datasets	2.12.0	2.12.0			2.12.0	
datashader	0.15.0	0.15.0	0.15.0		0.15.0	0.15.0
datashape	0.5.4	0.5.4	0.5.4		0.5.4	0.5.4
dbus	1.13.18	1.13.18				
debugpy	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713			20200713	202007
dill	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
docstring-to-markdown	0.11	0.11			0.11	0.11
docutils	0.18.1	0.18.1			0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9				
filelock	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0			6.0.0	6.0.0
flask	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1				
fonttools	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
future	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0		4.3.0	4.3.0
gettext					0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2		2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1			2.69.1	2.69.1
glob2	0.7	0.7	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0		0.5.0	0.5.0
gmp	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1		1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1			1.14.1	1.14.1
gstreamer	1.14.1	1.14.1			1.14.1	1.14.1
h5py	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6	1.12.1	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.16.2	1.16.2	1.16.2	1.14.8	1.16.2	1.16.2
huggingface_hub	0.15.1	0.15.1			0.15.1	
hvplot	0.8.4	0.8.4	0.8.4	0.7.3	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt						
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.
imageio	2.31.1	2.31.1	2.31.1	2.26.0	2.31.1	2.31.1
imagesize	1.4.1	1.4.1			1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0			6.0.0	6.0.0
incremental	21.3.0	21.3.0	21.3.0		21.3.0	21.3.0
inflection	0.5.1	0.5.1			0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0					
intervaltree	3.1.0	3.1.0			3.1.0	3.1.0
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.0.4	1.0.4	1.0.4		1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1			3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1				
jellyfish	0.9.0	0.9.0			0.9.0	0.9.0
jinja2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0			0.2.0	0.2.0
jmespath	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e	9e	9e
jq	1.6	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0	8.1.0	8.1.0	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3		0.6.3	0.6.3
jupyter_server	2.5.0	2.5.0	2.5.0	1.23.4	2.5.0	2.5.0
jupyter_server_fileid	0.9.0	0.9.0	0.9.0		0.9.0	0.9.0
jupyter_server_terminals	0.4.4	0.4.4	0.4.4		0.4.4	0.4.4
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0		0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4	0.2.4		0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1			23.13.1	23.13.1

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.19.4	1.20.1	1.19.4	1.19.4	1.19.4
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1	0.2	0.2
lcms2	2.12	2.12	2.12	2.12	2.12	2.12
ld64					530	530
ld64_osx-64						530
ld64_osx-arm64					530	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
ldid					2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	14.0.6			14.0.6	14.0.6
libclang13		14.0.6			14.0.6	14.0.6
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12		2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran					5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1					
libllvm14	14.0.6	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libogg						
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.9			12.9	12.9
libprotobuf	3.20.3	3.20.3	3.20.3		3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3			1.9.3	1.9.3
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0		0.13.0	0.15.0
libtiff	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libuv					1.44.2	
libvorbis						
libwebp	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libxcb	1.15	1.15				
libxkbcommon	1.0.1	1.0.1				
libxml2	2.9.14	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
libxslt	1.1.35	1.1.37	1.1.37	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0		2.0.0	2.0.0
llvm-openmp					14.0.6	14.0.6
llvmlite	0.40.0	0.40.0	0.40.0		0.40.0	0.40.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.2	4.9.2	4.9.2	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10	2.10	2.10
m2-msys2-runtime						
m2-patch						
m2w64-libwinpthread-git						
markdown	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0		2.2.0	2.2.0
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0		0.3.0		0.3.0	0.3.0
mdurl	0.1.0		0.1.0		0.1.0	0.1.0
menuinst						
mistune	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0					
mkl-service	2.4.0					
mkl_fft	1.3.6					
mkl_random	1.2.2					
mock				4.0.3		
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0					
mpich	4.1.1					
mpmath	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch						
multidict	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0		0.6.0	0.6.0

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
multiprocess	0.70.14	0.70.14			0.70.14	
munkres	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3			0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0			0.4.0	0.4.0
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
networkx	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
ninja	1.10.2	1.10.2			1.10.2	
ninja-base	1.10.2	1.10.2			1.10.2	
nltk	3.7	3.7	3.7	3.7	3.7	3.7
notebook	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35			4.35	4.35
nss	3.89.1	3.89.1			3.89.1	3.89.1
numba	0.57.0	0.57.0	0.57.0		0.57.0	0.57.0
numexpr	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0			1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4		1.7.4	1.7.4
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.1.0	0.14.3	1.1.0	0.12.6	1.1.0	1.1.0
param	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0
paramiko						
parsel	1.6.0	1.6.0	1.6.0		1.6.0	1.6.0
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2		
pathlib	1.0.1	1.0.1			1.0.1	1.0.1
pathspec	0.10.3	0.10.3			0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45			8.45	8.45
pcre2	10.37	10.37	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11			3.11	3.11
pooch	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
powershell_shortcut						
poyo	0.5.0	0.5.0			0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16		0.1.16	0.1.16
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0		8.0.0	8.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
pyasn1	0.4.8	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	4	4	4	4	4	4
pycodestyle	2.10.0	2.10.0			2.10.0	2.10.0
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0			6.3.0	6.3.0
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0			2.4.0	2.4.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0			2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0			0.4.0	0.4.0
pynacl						
pyobjc-core					9.0	9.0
pyobjc-framework-cocoa					9.0	9.0
pyobjc-framework-coreservices					9.0	9.0
pyobjc-framework-fsevents					9.0	9.0
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7			5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0			12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7			5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0	3.8.0	3.8.0
pytest	7.3.1	7.3.1	7.3.1	7.3.1	7.3.1	7.3.1
python	3.11.3	3.11.3	3.11.3	3.11.3	3.11.3	3.11.3

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
python-libarchive-c	2.9	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1			1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0			1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2			1.7.2	1.7.2
python-slugify	5.0.2	5.0.2			5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2			2.0.2	
python.app					3	3
pytoolconfig	1.2.5	1.2.5			1.2.5	1.2.5
pytorch	2.0.1	2.0.1			2.0.1	
pytz	2022.7	2022.7	2022.7	2022.7	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
pywin32						
pywin32-ctypes						
pywinpty						
pyxdg	0.27	0.27				
pyyaml	6.0	6.0	6.0	6.0	6.0	6.0
pyzmq	25.1.0	25.1.0	25.1.0	25.1.0	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2			3.0.2	3.0.2
qstylizer	0.2.2	0.2.2			0.2.2	0.2.2
qt-main	5.15.2	5.15.2			5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9			5.15.9	5.15.9
qtawesome	1.2.2	1.2.2			1.2.2	1.2.2
qtconsole	5.4.2	5.4.2			5.4.2	5.4.2
qtpy	2.2.0	2.2.0			2.2.0	2.2.0
qtwebkit	5.212	5.212			5.212	5.212
queuelib	1.5.0	1.5.0	1.5.0		1.5.0	1.5.0
re2	2022.04.01	2022.04.01	2022.04.01		2022.04.01	2022.04
readline	8.2	8.2	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0
requests-file	1.5.1	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	0.9.1	0.9.1	0.9.1	0.9.1	0.9.1	0.9.1
responses	0.13.3	0.13.3			0.13.3	
rfc3339-validator	0.1.4	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1	0.1.1		0.1.1	0.1.1
rope	1.7.0	1.7.0			1.7.0	1.7.0
rtree	1.0.1	1.0.1			1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
s3transfer			0.6.0	0.6.0		0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
scikit-learn-intelex	2023.1.1					
scipy	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
seaborn	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1				
send2trash	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0
sip	6.6.2	6.6.2			6.6.2	6.6.2
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sleef					3.5.1	
smart_open	5.2.1	5.2.1	5.2.1		5.2.1	5.2.1
snappy	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2			5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0			2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1			1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3			1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5			1.1.5	1.1.5
spyder	5.4.3	5.4.3			5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3			2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5	0.13.5	0.13.5	0.13.5	0.13.5
sympy	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10
tapi					1100.0.11	1000.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3			1.3	1.3
textdistance	4.2.1	4.2.1			4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1			0.1.1	0.1.1
tiffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
tokenizers	0.13.2	0.13.2			0.13.2	
toml	0.10.2	0.10.2			0.10.2	0.10.2

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
tomli	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.2	6.2	6.2	6.2	6.2	6.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1	4.29.2	2.1.1
twisted	22.10.0	22.10.0	22.10.0		22.10.0	22.10.0
twisted-iocpsupport						
typing-extensions	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1		1.0.1	1.0.1
ujson	5.4.0	5.4.0			5.4.0	5.4.0
unidecode	1.2.0	1.2.0			1.2.0	1.2.0
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1		2.6.1	2.6.1
vc						
vs2015_runtime						
w3lib	1.21.0	1.21.0	1.21.0		1.21.0	1.21.0
watchdog	2.1.6	2.1.6			2.1.6	2.1.6
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2			1.0.2	1.0.2
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5
win_inet_pton						
winpty						
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2			3.0.2	3.0.2
xarray	2022.11.0	2022.11.0	2022.11.0		2022.11.0	2022.11
xlwings					0.29.1	0.29.1
xxhash	0.8.0	0.8.0			0.8.0	
xyzservices	2022.9.0		2022.9.0		2022.9.0	2022.9.
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9		0.5.9	0.5.9
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0			0.31.0	0.31.0
yarl	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2		0.8.2	0.8.2
zeromq	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5		0.5.5	0.5.5
zict	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7

Table 21 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
zope	1.0	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_anaconda_depends	2023.07	2023.07	2023.07	2023.07
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	20211102.0	
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0	
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0	
alabaster	0.7.12	0.7.12		
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2		
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3		
arrow-cpp	11.0.0	11.0.0	11.0.0	
astroid	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0		
attrs	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0	
autopep8	1.6.0	1.6.0		
aws-c-common	0.4.57	0.5.11	0.4.57	
aws-c-event-stream	0.1.6	0.1.6	0.1.6	
aws-checksums	0.1.9	0.1.11	0.1.9	
aws-sdk-cpp	1.8.185	1.8.185	1.8.185	
babel	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0	3.2.0	

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Table 22 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4		
black	23.3.0	23.3.0		
blas	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.1.1	2.4.3	3.1.1	2.4.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.73.0	
boto3			1.24.28	1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0	
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.5.2	23.5.2	23.5.2	23.5.2
conda-build	3.25.0	3.25.0	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3
conda-index	0.2.3	0.2.3	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41		
conda-token	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2
constantly	15.1.0	15.1.0	15.1.0	
contourpy	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3		
cryptography	39.0.1	39.0.1	39.0.1	39.0.1
cssselect	1.1.0	1.1.0	1.1.0	
curl	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0

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Table 22 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1			
dal	2023.1.1			
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0
datasets	2.12.0	2.12.0		
datashader	0.15.0	0.15.0	0.15.0	
datashape	0.5.4	0.5.4	0.5.4	
dbus	1.13.18	1.13.18		
debugpy	1.5.1	1.5.1	1.5.1	1.5.1
decorator	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		
dill	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11		
docutils	0.18.1	0.18.1		
entrypoints	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9		
filelock	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0		
flask	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1		
fonttools	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0
future	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0	
gflags	2.2.2	2.2.2	2.2.2	
giflib	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1		
glob2	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0	
gmp	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1	
gst-plugins-base	1.14.1	1.14.1		
gstreamer	1.14.1	1.14.1		
h5py	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.16.2	1.16.2	1.16.2	1.14.8
huggingface_hub	0.15.1	0.15.1		
hvplot	0.8.4	0.8.4	0.8.4	0.7.3
hyperlink	21.0.0	21.0.0	21.0.0	

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Table 22 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1	2.31.1	2.26.0
imagesize	1.4.1	1.4.1		
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0		
incremental	21.3.0	21.3.0	21.3.0	
inflection	0.5.1	0.5.1		
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0			
intervaltree	3.1.0	3.1.0		
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0	
itemloaders	1.0.4	1.0.4	1.0.4	
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1		
jedi	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1		
jellyfish	0.9.0	0.9.0		
jinja2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0		
jmespath	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e
jq	1.6	1.6	1.6	
json5	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3	
jupyter_server	2.5.0	2.5.0	2.5.0	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0	
jupyter_server_terminals	0.4.4	0.4.4	0.4.4	
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0	
jupyter_ydoc	0.2.4	0.2.4	0.2.4	
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5

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Table 22 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
jxrlib	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1		
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.19.4	1.20.1	1.19.4
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1
lcms2	2.12	2.12	2.12	2.12
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
lerc	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0	
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	14.0.6		
libclang13		14.0.6		
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libdeflate	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
liblief	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1			
libllvm14	14.0.6	14.0.6	14.0.6	
libmamba	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libopenblas		0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.9		
libprotobuf	3.20.3	3.20.3	3.20.3	
libsodium	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3		
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0	
libtiff	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libwebp	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
libxcb	1.15	1.15		
libxkbcommon	1.0.1	1.0.1		
libxml2	2.9.14	2.10.3	2.10.3	2.10.3
libxslt	1.1.35	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0	
llvmlite	0.40.0	0.40.0	0.40.0	
locket	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.2	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10
markdown	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0	
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0		0.3.0	
mdurl	0.1.0		0.1.0	
mistune	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0			
mkl-service	2.4.0			
mkl_fft	1.3.6			
mkl_random	1.2.2			
mock				4.0.3
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0			
mpich	4.1.1			
mpmath	1.2.1	1.2.1	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3
multidict	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0	
multiprocess	0.70.14	0.70.14		
munkres	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3		
navigator-updater	0.4.0	0.4.0		
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6
networkx	2.8.4	2.8.4	2.8.4	2.8.4
ninja	1.10.2	1.10.2		
ninja-base	1.10.2	1.10.2		
nltk	3.7	3.7	3.7	3.7

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
notebook	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35		
nss	3.89.1	3.89.1		
numba	0.57.0	0.57.0	0.57.0	
numexpr	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0
numpydoc	1.5.0	1.5.0		
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4	
packaging	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.1.0	0.14.3	1.1.0	0.12.6
param	1.13.0	1.13.0	1.13.0	1.13.0
parsel	1.6.0	1.6.0	1.6.0	
parso	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2
pathlib	1.0.1	1.0.1		
pathspec	0.10.3	0.10.3		
patsy	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45		
pcre2	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.1.2	23.1.2	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		
pooch	1.4.0	1.4.0	1.4.0	1.4.0
poyo	0.5.0	0.5.0		
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16	
psutil	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0	
py-lief	0.12.3	0.12.3	0.12.3	0.12.3

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pyarrow	11.0.0	11.0.0	11.0.0	
pyasn1	0.4.8	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	0.2.8	
pybind11-abi	4	4	4	4
pycodestyle	2.10.0	2.10.0		
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0		
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0		
pylint	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0		
pyls-spyder	0.4.0	0.4.0		
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7		
pyqt5-sip	12.11.0	12.11.0		
pyqtwebengine	5.15.7	5.15.7		
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0
pytest	7.3.1	7.3.1	7.3.1	7.3.1
python	3.11.3	3.11.3	3.11.3	3.11.3
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7	
python-libarchive-c	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1		
python-lsp-jsonrpc	1.0.0	1.0.0		
python-lsp-server	1.7.2	1.7.2		
python-slugify	5.0.2	5.0.2		
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2		
pytoolconfig	1.2.5	1.2.5		
pytorch	2.0.1	2.0.1		
pytz	2022.7	2022.7	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1
pyxdg	0.27	0.27		
pyyaml	6.0	6.0	6.0	6.0
pyzmq	25.1.0	25.1.0	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2		
qstylizer	0.2.2	0.2.2		

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
qt-main	5.15.2	5.15.2		
qt-webengine	5.15.9	5.15.9		
qtawesome	1.2.2	1.2.2		
qtconsole	5.4.2	5.4.2		
qtpy	2.2.0	2.2.0		
qtwebkit	5.212	5.212		
queuelib	1.5.0	1.5.0	1.5.0	
re2	2022.04.01	2022.04.01	2022.04.01	
readline	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0
requests-file	1.5.1	1.5.1	1.5.1	
requests-toolbelt	0.9.1	0.9.1	0.9.1	0.9.1
responses	0.13.3	0.13.3		
rfc3339-validator	0.1.4	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	0.1.1	
rope	1.7.0	1.7.0		
rtree	1.0.1	1.0.1		
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0
s3transfer			0.6.0	0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2	1.2.2	1.2.2
scikit-learn-intelex	2023.1.1			
scipy	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0	
seaborn	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1		
send2trash	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0	
setuptools	67.8.0	67.8.0	67.8.0	67.8.0
sip	6.6.2	6.6.2		
six	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	5.2.1	
snappy	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2		
sphinxcontrib-applehelp	1.0.2	1.0.2		
sphinxcontrib-devhelp	1.0.2	1.0.2		
sphinxcontrib-htmlhelp	2.0.0	2.0.0		
sphinxcontrib-jsmath	1.0.1	1.0.1		
sphinxcontrib-qthelp	1.0.3	1.0.3		
sphinxcontrib-serializinghtml	1.1.5	1.1.5		

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
spyder	5.4.3	5.4.3		
spyder-kernels	2.4.3	2.4.3		
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5	0.13.5	0.13.5
sympy	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3		
textdistance	4.2.1	4.2.1		
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		
tiffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0	
tokenizers	0.13.2	0.13.2		
toml	0.10.2	0.10.2		
tomli	2.0.1	2.0.1	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.2	6.2	6.2	6.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1
twisted	22.10.0	22.10.0	22.10.0	
typing-extensions	4.6.3	4.6.3	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3	4.6.3	4.6.3
tzdata	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1	
ujson	5.4.0	5.4.0		
unidecode	1.2.0	1.2.0		
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1	
w3lib	1.21.0	1.21.0	1.21.0	
watchdog	2.1.6	2.1.6		
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2		
wheel	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5
wrapt	1.14.1	1.14.1	1.14.1	1.14.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
wurlitzer	3.0.2	3.0.2		
xarray	2022.11.0	2022.11.0	2022.11.0	
xxhash	0.8.0	0.8.0		
xyzservices	2022.9.0		2022.9.0	
xz	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9	
yaml	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0		
yarl	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2	
zeromq	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5	
zict	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7	
zope	1.0	1.0	1.0	
zope.interface	5.4.0	5.4.0	5.4.0	
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07
abseil-cpp	20211102.0	20211102.0
aiobotocore	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0
aiohttp	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0
alabaster	0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1
anyio	3.5.0	3.5.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0
appnope	0.1.2	0.1.2
appscript	1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0
astroid	2.14.2	2.14.2

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Package Name	osx-arm64	osx-64
astropy	5.1	5.1
asttokens	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0
attrs	22.1.0	22.1.0
automat	20.2.0	20.2.0
autopep8	1.6.0	1.6.0
aws-c-common	0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6
aws-checksums	0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185
babel	2.11.0	2.11.0
backcall	0.2.0	0.2.0
backports	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4
backports.tempfile	1.0	1.0
backports.weakref	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4
black	23.3.0	23.3.0
blas	1.0	1.0
bleach	4.1.0	4.1.0
blosc	1.21.3	1.21.3
bokeh	3.1.1	3.1.1
boltons	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0
boto3		1.24.28
botocore	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1
clyent	1.2.2	1.2.2

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Package Name	osx-arm64	osx-64
colorama	0.4.6	0.4.6
colorcet	3.0.1	3.0.1
comm	0.1.2	0.1.2
conda	23.5.2	23.5.2
conda-build	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3
conda-index	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41
conda-token	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2
constantly	15.1.0	15.1.0
contourpy	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3
cryptography	39.0.1	39.0.1
cssselect	1.1.0	1.1.0
curl	8.1.1	8.1.1
cycler	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0
dask	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.6.0
datasets	2.12.0	
datashader	0.15.0	0.15.0
datashape	0.5.4	0.5.4
debugpy	1.5.1	1.5.1
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.6	0.3.6
distributed	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
filelock	3.9.0	3.9.0
flake8	6.0.0	6.0.0
flask	2.2.2	2.2.2
fmt	9.1.0	9.1.0
fonttools	4.25.0	4.25.0
freetype	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3
fsspec	2023.4.0	2023.3.0
future	0.18.3	0.18.3
gensim	4.3.0	4.3.0
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2

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Package Name	osx-arm64	osx-64
giflib	5.2.1	5.2.1
glib	2.69.1	2.69.1
glob2	0.7	0.7
glog	0.5.0	0.5.0
gmp	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
h5py	3.7.0	3.7.0
hdf5	1.12.1	1.10.6
heapdict	1.0.1	1.0.1
holoviews	1.16.2	1.16.2
huggingface_hub	0.15.1	
hvplot	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0
icu	68.1	58.2
idna	3.4	3.4
imagecodecs	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0
incremental	21.3.0	21.3.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.6.8	0.6.8
intervaltree	3.1.0	3.1.0
ipykernel	6.19.2	6.19.2
ipython	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4
isort	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0
itemloaders	1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	0.9.0	0.9.0
jinja2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0
jmespath	0.10.0	0.10.0
joblib	1.2.0	1.2.0
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1

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Package Name	osx-arm64	osx-64
jsonschema	4.17.3	4.17.3
jupyter	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3
jupyter_server	2.5.0	2.5.0
jupyter_server_fileid	0.9.0	0.9.0
jupyter_server_terminals	0.4.4	0.4.4
jupyter_server_ydoc	0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5
jxrlib	1.1	1.1
keyring	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4
krb5	1.19.4	1.19.4
lazy-object-proxy	1.6.0	1.6.0
lazy_loader	0.2	0.2
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libboost	1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0
libgfortran5	11.3.0	11.3.0
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0

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Package Name	osx-arm64	osx-64
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.9	12.9
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3
libssh2	1.10.0	1.10.0
libthrift	0.13.0	0.15.0
libtiff	4.5.0	4.5.0
libuv	1.44.2	
libwebp	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4
libxml2	2.10.3	2.10.3
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.40.0	0.40.0
locket	1.0.0	1.0.0
lxml	4.9.2	4.9.2
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
mistune	0.8.4	0.8.4
more-itertools	8.12.0	8.12.0
mpc	1.1.0	1.1.0
mpfr	4.0.2	4.0.2
mpmath	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3
multidict	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0
multiprocess	0.70.14	
munkres	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0
nbclassic	0.5.5	0.5.5
nbclient	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4
nbformat	5.7.0	5.7.0
ncurses	6.4	6.4

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Package Name	osx-arm64	osx-64
nest-asyncio	1.5.6	1.5.6
networkx	2.8.4	2.8.4
ninja	1.10.2	
ninja-base	1.10.2	
nltk	3.7	3.7
notebook	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2
nspr	4.35	4.35
nss	3.89.1	3.89.1
numba	0.57.0	0.57.0
numexpr	2.8.4	2.8.4
numpy	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u
orc	1.7.4	1.7.4
packaging	23.0	23.0
pandas	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0
panel	1.1.0	1.1.0
param	1.13.0	1.13.0
parsel	1.6.0	1.6.0
parso	0.8.3	0.8.3
partd	1.2.0	1.2.0
patch	2.7.6	2.7.6
pathlib	1.0.1	1.0.1
pathspec	0.10.3	0.10.3
patsy	0.5.3	0.5.3
pcre	8.45	8.45
pcre2	10.37	10.37
pep8	1.7.1	1.7.1
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	9.4.0	9.4.0
pip	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2
plotly	5.9.0	5.9.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11
pooch	1.4.0	1.4.0
poyo	0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36
protego	0.1.16	0.1.16
psutil	5.9.0	5.9.0

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Package Name	osx-arm64	osx-64
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0
py-lief	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	4	4
pycodestyle	2.10.0	2.10.0
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1
pygments	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0
pylint	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0
pyobjc-core	9.0	9.0
pyobjc-framework-cocoa	9.0	9.0
pyobjc-framework-coreservices	9.0	9.0
pyobjc-framework-fsevents	9.0	9.0
pyodbc	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0
pysocks	1.7.1	1.7.1
pytables	3.8.0	3.8.0
pytest	7.3.1	7.3.1
python	3.11.3	3.11.3
python-dateutil	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-xxhash	2.0.2	
python.app	3	3
pytoolconfig	1.2.5	1.2.5

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Package Name	osx-arm64	osx-64
pytorch	2.0.1	
pytz	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1
pyyaml	6.0	6.0
pyzmq	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2
qtpy	2.2.0	2.2.0
qtwebkit	5.212	5.212
queuelib	1.5.0	1.5.0
re2	2022.04.01	2022.04.01
readline	8.2	8.2
regex	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.29.0	2.29.0
requests-file	1.5.1	1.5.1
requests-toolbelt	0.9.1	0.9.1
responses	0.13.3	
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rope	1.7.0	1.7.0
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2023.4.0	2023.3.0
s3transfer		0.6.0
sacremoses	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2
scipy	1.10.1	1.10.1
scrapy	2.8.0	2.8.0
seaborn	0.12.2	0.12.2
send2trash	1.8.0	1.8.0
service_identity	18.1.0	18.1.0
setuptools	67.8.0	67.8.0
sip	6.6.2	6.6.2
six	1.16.0	1.16.0
sleef	3.5.1	
smart_open	5.2.1	5.2.1
snappy	1.1.9	1.1.9
sniffio	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.4	2.4

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Package Name	osx-arm64	osx-64
sphinx	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5
spyder	5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39
sqlite	3.41.2	3.41.2
stack_data	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5
sympy	1.11.1	1.11.1
tabulate	0.8.10	0.8.10
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0
three-merge	0.1.1	0.1.1
tiffile	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1
tk	8.6.12	8.6.12
tldextract	3.2.0	3.2.0
tokenizers	0.13.2	
toml	0.10.2	0.10.2
tomli	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.2	6.2
tqdm	4.65.0	4.65.0
traitlets	5.7.1	5.7.1
transformers	4.29.2	2.1.1
twisted	22.10.0	22.10.0
typing-extensions	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3
tzdata	2023c	2023c
uc-micro-py	1.0.1	1.0.1
ujson	5.4.0	5.4.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1
w3lib	1.21.0	1.21.0
watchdog	2.1.6	2.1.6

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Package Name	osx-arm64	osx-64
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2
wheel	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2022.11.0	2022.11.0
xlwings	0.29.1	0.29.1
xxhash	0.8.0	
xyzservices	2022.9.0	2022.9.0
xz	5.4.2	5.4.2
y-py	0.5.9	0.5.9
yaml	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0
yapf	0.31.0	0.31.0
yarl	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2
zeromq	4.3.4	4.3.4
zfp	0.5.5	0.5.5
zict	2.2.0	2.2.0
zipp	3.11.0	3.11.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2023.07
abseil-cpp	20211102.0
aiobotocore	2.4.2
aiofiles	22.1.0
aiohttp	3.8.3
aioitertools	0.7.1
aiosignal	1.2.0
aiosqlite	0.18.0
alabaster	0.7.12
anaconda-catalogs	0.2.0
anaconda-client	1.11.3
anaconda-navigator	2.4.2
anaconda-project	0.11.1
anyio	3.5.0

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Table 24 – continued from previous page

Package Name	win-64
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	11.0.0
astroid	2.14.2
astropy	5.1
asttokens	2.0.5
async-timeout	4.0.2
atomicwrites	1.4.0
attrs	22.1.0
automat	20.2.0
autopep8	1.6.0
aws-c-common	0.4.57
aws-c-event-stream	0.1.6
aws-checksums	0.1.9
aws-sdk-cpp	1.8.185
babel	2.11.0
backcall	0.2.0
backports	1.1
backports.functools_lru_cache	1.6.4
backports.tempfile	1.0
backports.weakref	1.0.post1
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	23.3.0
blas	1.0
bleach	4.1.0
blosc	1.21.3
bokeh	3.1.1
boltons	23.0.0
boost-cpp	1.73.0
boto3	1.24.28
botocore	1.27.59
bottleneck	1.3.5
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
bzip2	1.0.8
c-ares	1.19.0
c-blosc2	2.8.0
ca-certificates	2023.05.30
certifi	2023.5.7
cffi	1.15.1
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.0.4

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Table 24 – continued from previous page

Package Name	win-64
cloudpickle	2.2.1
clyent	1.2.2
colorama	0.4.6
colorcet	3.0.1
comm	0.1.2
conda	23.5.2
conda-build	3.25.0
conda-content-trust	0.1.3
conda-index	0.2.3
conda-libmamba-solver	23.5.0
conda-pack	0.6.0
conda-package-handling	2.1.0
conda-package-streaming	0.8.0
conda-repo-cli	1.0.41
conda-token	0.4.0
conda-verify	3.4.2
console_shortcut	0.1.1
constantly	15.1.0
contourpy	1.0.5
cookiecutter	1.7.3
cryptography	39.0.1
cssselect	1.1.0
curl	8.1.1
cycler	0.11.0
cytoolz	0.12.0
daal4py	2023.1.1
dal	2023.1.1
dask	2023.6.0
dask-core	2023.6.0
datashader	0.15.0
datashape	0.5.4
debugpy	1.5.1
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.6
distributed	2023.6.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
filelock	3.9.0
flake8	6.0.0
flask	2.2.2
fmt	9.1.0
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.3.3
fsspec	2023.3.0

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Package Name	win-64
future	0.18.3
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
glib	2.69.1
glob2	0.7
glog	0.5.0
greenlet	2.0.1
gst-plugins-base	1.18.5
gstreamer	1.18.5
h5py	3.7.0
hdf5	1.10.6
heapdict	1.0.1
holoviews	1.16.2
hvplot	0.8.4
hyperlink	21.0.0
icc_rt	2022.1.0
icu	58.2
idna	3.4
imagecodecs	2021.8.26
imageio	2.26.0
imagesize	1.4.1
imbalanced-learn	0.10.1
importlib-metadata	6.0.0
importlib_metadata	6.0.0
incremental	21.3.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.19.2
ipython	8.12.0
ipython_genutils	0.2.0
ipywidgets	8.0.4
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.0.4
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	0.9.0
jinja2	3.1.2
jinja2-time	0.2.0
jmespath	0.10.0
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.32

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Package Name	win-64
jsonpointer	2.1
jsonschema	4.17.3
jupyter	1.0.0
jupyter_client	8.1.0
jupyter_console	6.6.3
jupyter_core	5.3.0
jupyter_events	0.6.3
jupyter_server	2.5.0
jupyter_server_fileid	0.9.0
jupyter_server_terminals	0.4.4
jupyter_server_ydoc	0.8.0
jupyter_ydoc	0.2.4
jupyterlab	3.6.3
jupyterlab_pygments	0.1.2
jupyterlab_server	2.22.0
jupyterlab_widgets	3.0.5
jxrlib	1.1
keyring	23.13.1
kiwisolver	1.4.4
krb5	1.19.4
lazy-object-proxy	1.6.0
lazy_loader	0.2
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libboost	1.73.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.1.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4
libiconv	1.16
liblief	0.12.3
libllvm14	14.0.6
libmamba	1.4.1
libmambapy	1.4.1
libogg	1.3.5
libpng	1.6.39
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.22
libspatialindex	1.9.3
libssh2	1.10.0
libthrift	0.15.0
libtiff	4.5.0

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Package Name	win-64
libvorbis	1.3.7
libwebp	1.2.4
libwebp-base	1.2.4
libxml2	2.10.3
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.40.0
locket	1.0.0
lxml	4.9.2
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.1
matplotlib	3.7.1
matplotlib-base	3.7.1
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	1.4.19
mistune	0.8.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.6
mkl_random	1.2.2
more-itertools	8.12.0
mpmath	1.2.1
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.2
multipledispatch	0.6.0
munkres	1.1.4
mypy_extensions	0.4.3
navigator-updater	0.4.0
nbclassic	0.5.5
nbclient	0.5.13
nbconvert	6.5.4
nbformat	5.7.0
nest-asyncio	1.5.6
networkx	2.8.4
nltk	3.7
notebook	6.5.4
notebook-shim	0.2.2
numba	0.57.0

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Table 24 – continued from previous page

Package Name	win-64
numexpr	2.8.4
numpy	1.24.3
numpy-base	1.24.3
numpydoc	1.5.0
openjpeg	2.4.0
openpyxl	3.0.10
openssl	1.1.1u
orc	1.7.4
packaging	23.0
pandas	1.5.3
pandocfilters	1.5.0
panel	1.1.0
param	1.13.0
paramiko	2.8.1
parsel	1.6.0
parso	0.8.3
partd	1.2.0
pathlib	1.0.1
pathspec	0.10.3
patsy	0.5.3
pcre	8.45
pcre2	10.37
pep8	1.7.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	9.4.0
pip	23.1.2
pkginfo	1.9.6
platformdirs	2.5.2
plotly	5.9.0
pluggy	1.0.0
ply	3.11
pooch	1.4.0
powershell_shortcut	0.0.1
poyo	0.5.0
prometheus_client	0.14.1
prompt-toolkit	3.0.36
prompt_toolkit	3.0.36
protego	0.1.16
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	8.0.0
py-lief	0.12.3
pyarrow	11.0.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	4
pycodestyle	2.10.0
pycosat	0.6.4

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Package Name	win-64
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	2.3.0
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	4.0.34
pyopenssl	23.0.0
pyparsing	3.0.9
pyqt	5.15.7
pyqt5-sip	12.11.0
pyqtwebengine	5.15.7
pyrsistent	0.18.0
pysocks	1.7.1
pytables	3.8.0
pytest	7.3.1
python	3.11.3
python-dateutil	2.8.2
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	1.2.1
python-lsp-jsonrpc	1.0.0
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
pytoolconfig	1.2.5
pytz	2022.7
pyviz_comms	2.3.0
pywavelets	1.4.1
pywin32	305
pywin32-ctypes	0.2.0
pywinpty	2.0.10
pyyaml	6.0
pyzmq	25.1.0
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.2.0

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Package Name	win-64
qtwebkit	5.212
queuelib	1.5.0
re2	2022.04.01
regex	2022.7.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.29.0
requests-file	1.5.1
requests-toolbelt	0.9.1
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rope	1.7.0
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21
s3fs	2023.3.0
s3transfer	0.6.0
sacremoses	0.0.43
scikit-image	0.20.0
scikit-learn	1.2.2
scikit-learn-intelex	2023.1.1
scipy	1.10.1
scrapy	2.8.0
seaborn	0.12.2
send2trash	1.8.0
service_identity	18.1.0
setuptools	67.8.0
sip	6.6.2
six	1.16.0
smart_open	5.2.1
snappy	1.1.9
sniffio	1.2.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.4
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.5
spyder	5.4.3
spyder-kernels	2.4.3
sqlalchemy	1.4.39
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.13.5
sympy	1.11.1
tabulate	0.8.10

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Package Name	win-64
tbb	2021.8.0
tbb4py	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2021.7.2
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.2
tqdm	4.65.0
traitlets	5.7.1
transformers	2.1.1
twisted	22.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.6.3
typing_extensions	4.6.3
tzdata	2023c
uc-micro-py	1.0.1
ujson	5.4.0
unidecode	1.2.0
urllib3	1.26.16
utf8proc	2.6.1
vc	14.2
vs2015_runtime	14.27.29016
w3lib	1.21.0
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	0.58.0
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.38.4
widgetsnbextension	4.0.5
win_inet_pton	1.1.0
winpty	0.4.3
wrapt	1.14.1
xarray	2022.11.0
xlwings	0.29.1
xyzservices	2022.9.0
xz	5.4.2
y-py	0.5.9

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Package Name	win-64
yaml	0.2.5
yaml-cpp	0.7.0
yapf	0.31.0
yarl	1.8.1
ypy-websocket	0.8.2
zeromq	4.3.4
zfp	0.5.5
zict	2.2.0
zipp	3.11.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.19.0
zstd	1.5.5

Anaconda 2023.07-0 (Jul 11, 2023)

Python version: 3.11.3

User-facing Changes

- Conda has been updated to v23.5.0.
- Anaconda Navigator launches after installation with exe and pkg installers.

Bug Fixes

- Address a bug that can cause accidental file deletion with Windows uninstallers (see our blog post). A security patch is available for older versions.
- Fix a conda update bug that removes packages installed via the Anaconda Distribution installer.

Known Issues

- The .pkg installers may skip the "Destination Select" page after accepting the license agreement. See our Anaconda installation instructions for details.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07	2023.07	2023.07	2023.07	2023.07
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
abseil-cpp	20211102.0	20211102.0	20211102.0		20211102.0	202111
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0		22.1.0	22.1.0
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0		0.18.0	0.18.0
alabaster	0.7.12	0.7.12			0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3	1.11.3	1.11.3	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2			2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
applaunchservices					0.3.0	0.3.0
appnope					0.1.2	0.1.2
appscript					1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3			1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
astroid	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0			1.4.0	1.4.0
attrs	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0		20.2.0	20.2.0
autopep8	1.6.0	1.6.0			1.6.0	1.6.0
aws-c-common	0.4.57	0.5.11	0.4.57		0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6	0.1.6		0.1.6	0.1.6
aws-checksums	0.1.9	0.1.11	0.1.9		0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185	1.8.185		1.8.185	1.8.185
babel	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post1	1.0.post
bcrypt	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
binaryornot	0.4.4	0.4.4			0.4.4	0.4.4
black	23.3.0	23.3.0			23.3.0	23.3.0
blas	1.0	1.0	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.1.1	2.4.3	3.1.1	2.4.3	3.1.1	3.1.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
boto3			1.24.28	1.24.28		1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1		0.1	0.1
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05
cctools					949.0.1	949.0.1
cctools_osx-64						949.0.1
cctools_osx-arm64					949.0.1	
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0		2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-build	3.25.0	3.25.0	3.25.0	3.25.0	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3
conda-index	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41			1.0.41	1.0.41
conda-token	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2	3.4.2
console_shortcut						
constantly	15.1.0	15.1.0	15.1.0		15.1.0	15.1.0
contourpy	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3			1.7.3	1.7.3
cryptography	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
cssselect	1.1.0	1.1.0	1.1.0		1.1.0	1.1.0
curl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1					
dal	2023.1.1					
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
datasets	2.12.0	2.12.0			2.12.0	
datashader	0.15.0	0.15.0	0.15.0		0.15.0	0.15.0
datashape	0.5.4	0.5.4	0.5.4		0.5.4	0.5.4
dbus	1.13.18	1.13.18				
debugpy	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
decorator	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713			20200713	202007
dill	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0	2023.6.0	2023.6.
docstring-to-markdown	0.11	0.11			0.11	0.11
docutils	0.18.1	0.18.1			0.18.1	0.18.1
entrypoints	0.4	0.4	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9				
filelock	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0			6.0.0	6.0.0
flask	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1				
fonttools	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
future	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0		4.3.0	4.3.0
gettext					0.21.0	0.21.0
gflags	2.2.2	2.2.2	2.2.2		2.2.2	2.2.2
giflib	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1			2.69.1	2.69.1
glob2	0.7	0.7	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0		0.5.0	0.5.0
gmp	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1		1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1			1.14.1	1.14.1
gstreamer	1.14.1	1.14.1			1.14.1	1.14.1
h5py	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6	1.12.1	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1	1.0.1

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
holoviews	1.16.2	1.16.2	1.16.2	1.14.8	1.16.2	1.16.2
huggingface_hub	0.15.1	0.15.1			0.15.1	
hvplot	0.8.4	0.8.4	0.8.4	0.7.3	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0	21.0.0		21.0.0	21.0.0
icc_rt						
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.26	2021.8.
imageio	2.31.1	2.31.1	2.31.1	2.26.0	2.31.1	2.31.1
imagesize	1.4.1	1.4.1			1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0			6.0.0	6.0.0
incremental	21.3.0	21.3.0	21.3.0		21.3.0	21.3.0
inflection	0.5.1	0.5.1			0.5.1	0.5.1
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0					
intervaltree	3.1.0	3.1.0			3.1.0	3.1.0
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0		0.3.0	0.3.0
itemloaders	1.0.4	1.0.4	1.0.4		1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1			3.2.1	3.2.1
jedi	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1				
jellyfish	0.9.0	0.9.0			0.9.0	0.9.0
jinja2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0			0.2.0	0.2.0
jmespath	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e	9e	9e
jq	1.6	1.6	1.6		1.6	1.6
json5	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0	8.1.0	8.1.0	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3		0.6.3	0.6.3
jupyter_server	2.5.0	2.5.0	2.5.0	1.23.4	2.5.0	2.5.0
jupyter_server_fileid	0.9.0	0.9.0	0.9.0		0.9.0	0.9.0
jupyter_server_terminals	0.4.4	0.4.4	0.4.4		0.4.4	0.4.4
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0		0.8.0	0.8.0

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
jupyter_ydoc	0.2.4	0.2.4	0.2.4		0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1			23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.19.4	1.20.1	1.19.4	1.19.4	1.19.4
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1	0.2	0.2
lcms2	2.12	2.12	2.12	2.12	2.12	2.12
ld64					530	530
ld64_osx-64						530
ld64_osx-arm64					530	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
ldid					2.1.5	2.1.5
lerc	3.0	3.0	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0		1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	14.0.6			14.0.6	14.0.6
libclang13		14.0.6			14.0.6	14.0.6
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libdeflate	1.17	1.17	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12		2.1.12	2.1.12
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran					5.0.0	5.0.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0	11.3.0	11.3.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
liblief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1					
libllvm14	14.0.6	14.0.6	14.0.6		14.0.6	14.0.6
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libogg						
libopenblas		0.3.21	0.3.21	0.3.21	0.3.21	0.3.21

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libpng	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.9			12.9	12.9
libprotobuf	3.20.3	3.20.3	3.20.3		3.20.3	3.20.3
libsodium	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3			1.9.3	1.9.3
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libthrift	0.15.0	0.15.0	0.15.0		0.13.0	0.15.0
libtiff	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libuv					1.44.2	
libvorbis						
libwebp	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4	1.2.4
libxcb	1.15	1.15				
libxkbcommon	1.0.1	1.0.1				
libxml2	2.9.14	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
libxslt	1.1.35	1.1.37	1.1.37	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0		2.0.0	2.0.0
llvm-openmp					14.0.6	14.0.6
llvmlite	0.40.0	0.40.0	0.40.0		0.40.0	0.40.0
locket	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.2	4.9.2	4.9.2	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10	2.10	2.10
m2-msys2-runtime						
m2-patch						
m2w64-libwinpthread-git						
markdown	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0		2.2.0	2.2.0
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0		0.3.0		0.3.0	0.3.0
mdurl	0.1.0		0.1.0		0.1.0	0.1.0
menuinst						
mistune	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0					
mkl-service	2.4.0					
mkl_fft	1.3.6					
mkl_random	1.2.2					
mock				4.0.3		
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2	4.0.2

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
mpi	1.0					
mpich	4.1.1					
mpmath	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3	1.0.3
msys2-conda-epoch						
multidict	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0		0.6.0	0.6.0
multiprocess	0.70.14	0.70.14			0.70.14	
munkres	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3			0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0			0.4.0	0.4.0
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
nbformat	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6
networkx	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
ninja	1.10.2	1.10.2			1.10.2	
ninja-base	1.10.2	1.10.2			1.10.2	
nltk	3.7	3.7	3.7	3.7	3.7	3.7
notebook	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35			4.35	4.35
nss	3.89.1	3.89.1			3.89.1	3.89.1
numba	0.57.0	0.57.0	0.57.0		0.57.0	0.57.0
numexpr	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0			1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1		6.9.7.1	6.9.7.1
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4		1.7.4	1.7.4
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.1.0	0.14.3	1.1.0	0.12.6	1.1.0	1.1.0
param	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0	1.13.0
paramiko						
parsel	1.6.0	1.6.0	1.6.0		1.6.0	1.6.0
parso	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2		
pathlib	1.0.1	1.0.1			1.0.1	1.0.1
pathspec	0.10.3	0.10.3			0.10.3	0.10.3
patsy	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45			8.45	8.45

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pcre2	10.37	10.37	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11			3.11	3.11
pooch	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0	1.4.0
powershell_shortcut						
poyo	0.5.0	0.5.0			0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16		0.1.16	0.1.16
psutil	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0		8.0.0	8.0.0
py-lief	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0		11.0.0	11.0.0
pyasn1	0.4.8	0.4.8	0.4.8		0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8	0.2.8		0.2.8	0.2.8
pybind11-abi	4	4	4	4	4	4
pycodestyle	2.10.0	2.10.0			2.10.0	2.10.0
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5		2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0			6.3.0	6.3.0
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0			2.4.0	2.4.0
pylint	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0			2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0			0.4.0	0.4.0
pynacl						
pyobjc-core					9.0	9.0
pyobjc-framework-cocoa					9.0	9.0
pyobjc-framework-coreservices					9.0	9.0
pyobjc-framework-fsevents					9.0	9.0
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7			5.15.7	5.15.7

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pyqt5-sip	12.11.0	12.11.0			12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7			5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0	3.8.0	3.8.0
pytest	7.3.1	7.3.1	7.3.1	7.3.1	7.3.1	7.3.1
python	3.11.3	3.11.3	3.11.3	3.11.3	3.11.3	3.11.3
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
python-libarchive-c	2.9	2.9	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1			1.2.1	1.2.1
python-lsp-jsonrpc	1.0.0	1.0.0			1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2			1.7.2	1.7.2
python-slugify	5.0.2	5.0.2			5.0.2	5.0.2
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2			2.0.2	
python.app					3	3
pytoolconfig	1.2.5	1.2.5			1.2.5	1.2.5
pytorch	2.0.1	2.0.1			2.0.1	
pytz	2022.7	2022.7	2022.7	2022.7	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
pywin32						
pywin32-ctypes						
pywinpty						
pyxdg	0.27	0.27				
pyyaml	6.0	6.0	6.0	6.0	6.0	6.0
pyzmq	25.1.0	25.1.0	25.1.0	25.1.0	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2			3.0.2	3.0.2
qstylizer	0.2.2	0.2.2			0.2.2	0.2.2
qt-main	5.15.2	5.15.2			5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9			5.15.9	5.15.9
qtawesome	1.2.2	1.2.2			1.2.2	1.2.2
qtconsole	5.4.2	5.4.2			5.4.2	5.4.2
qtpy	2.2.0	2.2.0			2.2.0	2.2.0
qtwebkit	5.212	5.212			5.212	5.212
queuelib	1.5.0	1.5.0	1.5.0		1.5.0	1.5.0
re2	2022.04.01	2022.04.01	2022.04.01		2022.04.01	2022.04
readline	8.2	8.2	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.9	2022.7.
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0
requests-file	1.5.1	1.5.1	1.5.1		1.5.1	1.5.1
requests-toolbelt	0.9.1	0.9.1	0.9.1	0.9.1	0.9.1	0.9.1
responses	0.13.3	0.13.3			0.13.3	
rfc3339-validator	0.1.4	0.1.4	0.1.4		0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1	0.1.1		0.1.1	0.1.1

Table 25 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
rope	1.7.0	1.7.0			1.7.0	1.7.0
rtree	1.0.1	1.0.1			1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0	2023.4.0	2023.3.
s3transfer			0.6.0	0.6.0		0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2	1.2.2
scikit-learn-intelex	2023.1.1					
scipy	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0		2.8.0	2.8.0
seaborn	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1				
send2trash	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0		18.1.0	18.1.0
setuptools	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0
sip	6.6.2	6.6.2			6.6.2	6.6.2
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sleef					3.5.1	
smart_open	5.2.1	5.2.1	5.2.1		5.2.1	5.2.1
snappy	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4	2.4	2.4
sphinx	5.0.2	5.0.2			5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2			1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0			2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1			1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3			1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5			1.1.5	1.1.5
spyder	5.4.3	5.4.3			5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3			2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5	0.13.5	0.13.5	0.13.5	0.13.5
sympy	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10	0.8.10
tapi					1100.0.11	1000.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.0	2021.8.
tblib	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3			1.3	1.3
textdistance	4.2.1	4.2.1			4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
three-merge	0.1.1	0.1.1			0.1.1	0.1.1
tiffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.2	2021.7.
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0		3.2.0	3.2.0
tokenizers	0.13.2	0.13.2			0.13.2	
toml	0.10.2	0.10.2			0.10.2	0.10.2
tomli	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.2	6.2	6.2	6.2	6.2	6.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1	4.29.2	2.1.1
twisted	22.10.0	22.10.0	22.10.0		22.10.0	22.10.0
twisted-iocpsupport						
typing-extensions	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3	4.6.3
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1		1.0.1	1.0.1
ujson	5.4.0	5.4.0			5.4.0	5.4.0
unidecode	1.2.0	1.2.0			1.2.0	1.2.0
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1		2.6.1	2.6.1
vc						
vs2015_runtime						
w3lib	1.21.0	1.21.0	1.21.0		1.21.0	1.21.0
watchdog	2.1.6	2.1.6			2.1.6	2.1.6
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
webencodings	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2			1.0.2	1.0.2
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5	4.0.5
win_inet_pton						
winpty						
wrapt	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2			3.0.2	3.0.2
xarray	2022.11.0	2022.11.0	2022.11.0		2022.11.0	2022.11
xlwings					0.29.1	0.29.1
xxhash	0.8.0	0.8.0			0.8.0	
xyzservices	2022.9.0		2022.9.0		2022.9.0	2022.9.
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9		0.5.9	0.5.9
yaml	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0			0.31.0	0.31.0
yarl	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1	1.8.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
ypy-websocket	0.8.2	0.8.2	0.8.2		0.8.2	0.8.2
zeromq	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5		0.5.5	0.5.5
zict	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7		2.0.7	2.0.7
zope	1.0	1.0	1.0		1.0	1.0
zope.interface	5.4.0	5.4.0	5.4.0		5.4.0	5.4.0
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_anaconda_depends	2023.07	2023.07	2023.07	2023.07
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
abseil-cpp	20211102.0	20211102.0	20211102.0	
aiobotocore	2.5.0	2.5.0	2.4.2	2.4.2
aiofiles	22.1.0	22.1.0	22.1.0	
aiohttp	3.8.3	3.8.3	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0	0.18.0	
alabaster	0.7.12	0.7.12		
anaconda-catalogs	0.2.0	0.2.0	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2		
anaconda-project	0.11.1	0.11.1	0.11.1	0.11.1
anyio	3.5.0	3.5.0	3.5.0	3.5.0
appdirs	1.4.4	1.4.4	1.4.4	1.4.4
argon2-cffi	21.3.0	21.3.0	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0	21.2.0	21.2.0
arrow	1.2.3	1.2.3		
arrow-cpp	11.0.0	11.0.0	11.0.0	
astroid	2.14.2	2.14.2	2.14.2	2.14.2
astropy	5.1	5.1	5.1	5.1
asttokens	2.0.5	2.0.5	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0		
attrs	22.1.0	22.1.0	22.1.0	22.1.0
automat	20.2.0	20.2.0	20.2.0	
autopep8	1.6.0	1.6.0		
aws-c-common	0.4.57	0.5.11	0.4.57	
aws-c-event-stream	0.1.6	0.1.6	0.1.6	
aws-checksums	0.1.9	0.1.11	0.1.9	
aws-sdk-cpp	1.8.185	1.8.185	1.8.185	

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
babel	2.11.0	2.11.0	2.11.0	2.11.0
backcall	0.2.0	0.2.0	0.2.0	0.2.0
backports	1.1	1.1	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4	1.6.4	1.6.4
backports.tempfile	1.0	1.0	1.0	1.0
backports.weakref	1.0.post1	1.0.post1	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0	3.2.0	
beautifulsoup4	4.12.2	4.12.2	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4		
black	23.3.0	23.3.0		
blas	1.0	1.0	1.0	1.0
bleach	4.1.0	4.1.0	4.1.0	4.1.0
blosc	1.21.3	1.21.3	1.21.3	1.21.3
bokeh	3.1.1	2.4.3	3.1.1	2.4.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0	1.73.0	
boto3			1.24.28	1.24.28
botocore	1.29.76	1.29.76	1.27.59	1.27.59
bottleneck	1.3.5	1.3.5	1.3.5	1.3.5
brotli	1.0.9	1.0.9	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
brunsli	0.1	0.1	0.1	
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0	2.8.0	
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1
cfitsio	3.470	3.470	3.470	3.470
chardet	4.0.0	4.0.0	4.0.0	4.0.0
charls	2.2.0	2.2.0	2.2.0	
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
click	8.0.4	8.0.4	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1	2.2.1	2.2.1
clyent	1.2.2	1.2.2	1.2.2	1.2.2
colorama	0.4.6	0.4.6	0.4.6	0.4.6
colorcet	3.0.1	3.0.1	3.0.1	3.0.1
comm	0.1.2	0.1.2	0.1.2	0.1.2
conda	23.5.0	23.5.0	23.5.0	23.5.0
conda-build	3.25.0	3.25.0	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3
conda-index	0.2.3	0.2.3	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41		
conda-token	0.4.0	0.4.0	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2	3.4.2	3.4.2

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
constantly	15.1.0	15.1.0	15.1.0	
contourpy	1.0.5	1.0.5	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3		
cryptography	39.0.1	39.0.1	39.0.1	39.0.1
cssselect	1.1.0	1.1.0	1.1.0	
curl	8.1.1	8.1.1	8.1.1	8.1.1
cycler	0.11.0	0.11.0	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0	0.12.0	0.12.0
daal4py	2023.1.1			
dal	2023.1.1			
dask	2023.6.0	2023.4.1	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.4.1	2023.6.0	2023.6.0
datasets	2.12.0	2.12.0		
datashader	0.15.0	0.15.0	0.15.0	
datashape	0.5.4	0.5.4	0.5.4	
dbus	1.13.18	1.13.18		
debugpy	1.5.1	1.5.1	1.5.1	1.5.1
decorator	5.1.1	5.1.1	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1	0.7.1	0.7.1
diff-match-patch	20200713	20200713		
dill	0.3.6	0.3.6	0.3.6	0.3.6
distributed	2023.6.0	2023.4.1	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11		
docutils	0.18.1	0.18.1		
entrypoints	0.4	0.4	0.4	0.4
et_xmlfile	1.1.0	1.1.0	1.1.0	1.1.0
executing	0.8.3	0.8.3	0.8.3	0.8.3
expat	2.4.9	2.4.9		
filelock	3.9.0	3.9.0	3.9.0	3.9.0
flake8	6.0.0	6.0.0		
flask	2.2.2	2.2.2	2.2.2	2.2.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0
fontconfig	2.14.1	2.14.1		
fonttools	4.25.0	4.25.0	4.25.0	4.25.0
freetype	2.12.1	2.12.1	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3	1.3.3	1.3.3
fsspec	2023.4.0	2023.4.0	2023.3.0	2023.3.0
future	0.18.3	0.18.3	0.18.3	0.18.3
gensim	4.3.0	4.3.0	4.3.0	
gflags	2.2.2	2.2.2	2.2.2	
giflib	5.2.1	5.2.1	5.2.1	5.2.1
glib	2.69.1	2.69.1		
glob2	0.7	0.7	0.7	0.7
glog	0.5.0	0.5.0	0.5.0	
gmp	6.2.1	6.2.1	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1	1.46.1	
gst-plugins-base	1.14.1	1.14.1		
gstreamer	1.14.1	1.14.1		

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
h5py	3.7.0	3.7.0	3.7.0	3.7.0
hdf5	1.10.6	1.10.6	1.10.6	1.10.6
heapdict	1.0.1	1.0.1	1.0.1	1.0.1
holoviews	1.16.2	1.16.2	1.16.2	1.14.8
huggingface_hub	0.15.1	0.15.1		
hvplot	0.8.4	0.8.4	0.8.4	0.7.3
hyperlink	21.0.0	21.0.0	21.0.0	
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
imagecodecs	2021.8.26	2021.8.26	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1	2.31.1	2.26.0
imagesize	1.4.1	1.4.1		
imbalanced-learn	0.10.1	0.10.1	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0		
incremental	21.3.0	21.3.0	21.3.0	
inflection	0.5.1	0.5.1		
iniconfig	1.1.1	1.1.1	1.1.1	1.1.1
intake	0.6.8	0.6.8	0.6.8	0.6.8
intel-openmp	2023.1.0			
intervaltree	3.1.0	3.1.0		
ipykernel	6.19.2	6.19.2	6.19.2	6.19.2
ipython	8.12.0	8.12.0	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4	8.0.4	8.0.4
isort	5.9.3	5.9.3	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0	0.3.0	
itemloaders	1.0.4	1.0.4	1.0.4	
itsdangerous	2.0.1	2.0.1	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1		
jedi	0.18.1	0.18.1	0.18.1	0.18.1
jeepney	0.7.1	0.7.1		
jellyfish	0.9.0	0.9.0		
jinja2	3.1.2	3.1.2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0		
jmespath	0.10.0	0.10.0	0.10.0	0.10.0
joblib	1.2.0	1.2.0	1.2.0	1.2.0
jpeg	9e	9e	9e	9e
jq	1.6	1.6	1.6	
json5	0.9.6	0.9.6	0.9.6	0.9.6
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
jsonschema	4.17.3	4.17.3	4.17.3	4.17.3
jupyter	1.0.0	1.0.0	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3	0.6.3	
jupyter_server	2.5.0	2.5.0	2.5.0	1.23.4
jupyter_server_fileid	0.9.0	0.9.0	0.9.0	

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
jupyter_server_terminals	0.4.4	0.4.4	0.4.4	
jupyter_server_ydoc	0.8.0	0.8.0	0.8.0	
jupyter_ydoc	0.2.4	0.2.4	0.2.4	
jupyterlab	3.6.3	3.6.3	3.6.3	3.3.2
jupyterlab_pygments	0.1.2	0.1.2	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0	2.22.0	2.21.0
jupyterlab_widgets	3.0.5	3.0.5	3.0.5	3.0.5
jxrlib	1.1	1.1	1.1	1.1
keyring	23.13.1	23.13.1		
kiwisolver	1.4.4	1.4.4	1.4.4	1.4.4
krb5	1.20.1	1.19.4	1.20.1	1.19.4
lazy-object-proxy	1.6.0	1.6.0	1.6.0	1.6.0
lazy_loader	0.2	0.2	0.2	0.1
lcms2	2.12	2.12	2.12	2.12
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
lerc	3.0	3.0	3.0	3.0
libaec	1.0.4	1.0.4	1.0.4	1.0.4
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libboost	1.73.0	1.73.0	1.73.0	
libbrotlicommon	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9	1.0.9	1.0.9
libclang	10.0.1	14.0.6		
libclang13		14.0.6		
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libdeflate	1.17	1.17	1.17	1.17
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libevent	2.1.12	2.1.12	2.1.12	
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgfortran5	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
liblief	0.12.3	0.12.3	0.12.3	0.12.3
libllvm10	10.0.1			
libllvm14	14.0.6	14.0.6	14.0.6	
libmamba	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libopenblas		0.3.21	0.3.21	0.3.21
libpng	1.6.39	1.6.39	1.6.39	1.6.39
libpq	12.15	12.9		
libprotobuf	3.20.3	3.20.3	3.20.3	
libsodium	1.0.18	1.0.18	1.0.18	1.0.18
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3		

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libthrift	0.15.0	0.15.0	0.15.0	
libtiff	4.5.0	4.5.0	4.5.0	4.5.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libwebp	1.2.4	1.2.4	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4	1.2.4	1.2.4
libxcb	1.15	1.15		
libxkbcommon	1.0.1	1.0.1		
libxml2	2.9.14	2.10.3	2.10.3	2.10.3
libxslt	1.1.35	1.1.37	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3	1.0.3	1.0.3
linkify-it-py	2.0.0		2.0.0	
llvmlite	0.40.0	0.40.0	0.40.0	
locket	1.0.0	1.0.0	1.0.0	1.0.0
lxml	4.9.1	4.9.2	4.9.2	4.9.2
lz4	4.3.2		4.3.2	4.3.2
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
lzo	2.10	2.10	2.10	2.10
markdown	3.4.1	3.4.1	3.4.1	3.4.1
markdown-it-py	2.2.0		2.2.0	
markupsafe	2.1.1	2.1.1	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6	0.1.6	0.1.6
mccabe	0.7.0	0.7.0	0.7.0	0.7.0
mdit-py-plugins	0.3.0		0.3.0	
mdurl	0.1.0		0.1.0	
mistune	0.8.4	0.8.4	0.8.4	0.8.4
mkl	2023.1.0			
mkl-service	2.4.0			
mkl_fft	1.3.6			
mkl_random	1.2.2			
mock				4.0.3
more-itertools	8.12.0	8.12.0	8.12.0	8.12.0
mpc	1.1.0	1.1.0	1.1.0	1.1.0
mpfr	4.0.2	4.0.2	4.0.2	4.0.2
mpi	1.0			
mpich	4.1.1			
mpmath	1.2.1	1.2.1	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3	1.0.3	1.0.3
multidict	6.0.2	6.0.2	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0	0.6.0	
multiprocess	0.70.14	0.70.14		
munkres	1.1.4	1.1.4	1.1.4	1.1.4
mypy_extensions	0.4.3	0.4.3		
navigator-updater	0.4.0	0.4.0		
nbclassic	0.5.5	0.5.5	0.5.5	0.5.5
nbclient	0.5.13	0.5.13	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4	6.5.4	6.5.4

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
nbformat	5.7.0	5.7.0	5.7.0	5.7.0
ncurses	6.4	6.4	6.4	6.4
nest-asyncio	1.5.6	1.5.6	1.5.6	1.5.6
networkx	2.8.4	2.8.4	2.8.4	2.8.4
ninja	1.10.2	1.10.2		
ninja-base	1.10.2	1.10.2		
nltk	3.7	3.7	3.7	3.7
notebook	6.5.4	6.5.4	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2	0.2.2	0.2.2
nspr	4.35	4.35		
nss	3.89.1	3.89.1		
numba	0.57.0	0.57.0	0.57.0	
numexpr	2.8.4	2.8.4	2.8.4	2.8.4
numpy	1.24.3	1.24.3	1.24.3	1.25.0
numpy-base	1.24.3	1.24.3	1.24.3	1.25.0
numpydoc	1.5.0	1.5.0		
oniguruma	6.9.7.1	6.9.7.1	6.9.7.1	
openjpeg	2.4.0	2.4.0	2.4.0	2.4.0
openpyxl	3.0.10	3.0.10	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u	1.1.1u	1.1.1u
orc	1.7.4	1.7.4	1.7.4	
packaging	23.0	23.0	23.0	23.0
pandas	1.5.3	1.5.3	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0	1.5.0	1.5.0
panel	1.1.0	0.14.3	1.1.0	0.12.6
param	1.13.0	1.13.0	1.13.0	1.13.0
parsel	1.6.0	1.6.0	1.6.0	
parso	0.8.3	0.8.3	0.8.3	0.8.3
partd	1.2.0	1.2.0	1.2.0	1.2.0
patch	2.7.6	2.7.6	2.7.6	2.7.6
patchelf	0.17.2	0.17.2	0.17.2	0.17.2
pathlib	1.0.1	1.0.1		
pathspec	0.10.3	0.10.3		
patsy	0.5.3	0.5.3	0.5.3	0.5.3
pcre	8.45	8.45		
pcre2	10.37	10.37	10.37	10.37
pep8	1.7.1	1.7.1	1.7.1	1.7.1
pexpect	4.8.0	4.8.0	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5	0.7.5	0.7.5
pillow	9.4.0	9.4.0	9.4.0	9.4.0
pip	23.1.2	23.1.2	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2	2.5.2	2.5.2
plotly	5.9.0	5.9.0	5.9.0	5.9.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
ply	3.11	3.11		
pooch	1.4.0	1.4.0	1.4.0	1.4.0
poyo	0.5.0	0.5.0		
prometheus_client	0.14.1	0.14.1	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36	3.0.36	3.0.36

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
prompt_toolkit	3.0.36	3.0.36	3.0.36	3.0.36
protego	0.1.16	0.1.16	0.1.16	
psutil	5.9.0	5.9.0	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0	8.0.0	
py-lief	0.12.3	0.12.3	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0	11.0.0	
pyasn1	0.4.8	0.4.8	0.4.8	
pyasn1-modules	0.2.8	0.2.8	0.2.8	
pybind11-abi	4	4	4	4
pycodestyle	2.10.0	2.10.0		
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyct	0.5.0	0.5.0	0.5.0	0.5.0
pycurl	7.45.2	7.45.2	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5	2.0.5	
pydocstyle	6.3.0	6.3.0		
pyerfa	2.0.0	2.0.0	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1	3.0.1	3.0.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0		
pylint	2.16.2	2.16.2	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0		
pyls-spyder	0.4.0	0.4.0		
pyodbc	4.0.34	4.0.34	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9	3.0.9	3.0.9
pyqt	5.15.7	5.15.7		
pyqt5-sip	12.11.0	12.11.0		
pyqtwebengine	5.15.7	5.15.7		
pyrsistent	0.18.0	0.18.0	0.18.0	0.18.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
pytables	3.8.0	3.8.0	3.8.0	3.7.0
pytest	7.3.1	7.3.1	7.3.1	7.3.1
python	3.11.3	3.11.3	3.11.3	3.11.3
python-dateutil	2.8.2	2.8.2	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7	2.0.7	
python-libarchive-c	2.9	2.9	2.9	2.9
python-lmdb	1.4.1	1.4.1	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1		
python-lsp-jsonrpc	1.0.0	1.0.0		
python-lsp-server	1.7.2	1.7.2		
python-slugify	5.0.2	5.0.2		
python-snappy	0.6.1	0.6.1	0.6.1	0.6.1
python-xxhash	2.0.2	2.0.2		
pytoolconfig	1.2.5	1.2.5		
pytorch	2.0.1	2.0.1		
pytz	2022.7	2022.7	2022.7	2022.7

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pyviz_comms	2.3.0	2.3.0	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1	1.4.1	1.4.1
pyxdg	0.27	0.27		
pyyaml	6.0	6.0	6.0	6.0
pyzmq	25.1.0	25.1.0	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2		
qstylizer	0.2.2	0.2.2		
qt-main	5.15.2	5.15.2		
qt-webengine	5.15.9	5.15.9		
qtawesome	1.2.2	1.2.2		
qtconsole	5.4.2	5.4.2		
qtpy	2.2.0	2.2.0		
qtwebkit	5.212	5.212		
queuelib	1.5.0	1.5.0	1.5.0	
re2	2022.04.01	2022.04.01	2022.04.01	
readline	8.2	8.2	8.2	8.2
regex	2022.7.9	2022.7.9	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0
requests-file	1.5.1	1.5.1	1.5.1	
requests-toolbelt	0.9.1	0.9.1	0.9.1	0.9.1
responses	0.13.3	0.13.3		
rfc3339-validator	0.1.4	0.1.4	0.1.4	
rfc3986-validator	0.1.1	0.1.1	0.1.1	
rope	1.7.0	1.7.0		
rtree	1.0.1	1.0.1		
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21	0.17.21	0.17.21
s3fs	2023.4.0	2023.4.0	2023.3.0	2023.3.0
s3transfer			0.6.0	0.6.0
sacremoses	0.0.43	0.0.43	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2	1.2.2	1.2.2
scikit-learn-intelex	2023.1.1			
scipy	1.10.1	1.10.1	1.10.1	1.10.1
scrapy	2.8.0	2.8.0	2.8.0	
seaborn	0.12.2	0.12.2	0.12.2	0.12.2
secretstorage	3.3.1	3.3.1		
send2trash	1.8.0	1.8.0	1.8.0	1.8.0
service_identity	18.1.0	18.1.0	18.1.0	
setuptools	67.8.0	67.8.0	67.8.0	67.8.0
sip	6.6.2	6.6.2		
six	1.16.0	1.16.0	1.16.0	1.16.0
smart_open	5.2.1	5.2.1	5.2.1	
snappy	1.1.9	1.1.9	1.1.9	1.1.9
sniffio	1.2.0	1.2.0	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0	2.4.0	2.4.0
soupsieve	2.4	2.4	2.4	2.4

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Table 26 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
sphinx	5.0.2	5.0.2		
sphinxcontrib-applehelp	1.0.2	1.0.2		
sphinxcontrib-devhelp	1.0.2	1.0.2		
sphinxcontrib-htmlhelp	2.0.0	2.0.0		
sphinxcontrib-jsmath	1.0.1	1.0.1		
sphinxcontrib-qthelp	1.0.3	1.0.3		
sphinxcontrib-serializinghtml	1.1.5	1.1.5		
spyder	5.4.3	5.4.3		
spyder-kernels	2.4.3	2.4.3		
sqlalchemy	1.4.39	1.4.39	1.4.39	1.4.39
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
stack_data	0.2.0	0.2.0	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5	0.13.5	0.13.5
sympy	1.11.1	1.11.1	1.11.1	1.11.1
tabulate	0.8.10	0.8.10	0.8.10	0.8.10
tbb	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0	1.7.0	1.7.0
tenacity	8.2.2	8.2.2	8.2.2	8.2.2
terminado	0.17.1	0.17.1	0.17.1	0.17.1
text-unidecode	1.3	1.3		
textdistance	4.2.1	4.2.1		
threadpoolctl	2.2.0	2.2.0	2.2.0	2.2.0
three-merge	0.1.1	0.1.1		
tiffile	2021.7.2	2021.7.2	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1	1.2.1	1.2.1
tk	8.6.12	8.6.12	8.6.12	8.6.12
tldextract	3.2.0	3.2.0	3.2.0	
tokenizers	0.13.2	0.13.2		
toml	0.10.2	0.10.2		
tomli	2.0.1	2.0.1	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1	0.11.1	0.11.1
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tornado	6.2	6.2	6.2	6.2
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
traitlets	5.7.1	5.7.1	5.7.1	5.7.1
transformers	4.29.2	4.29.2	2.1.1	2.1.1
twisted	22.10.0	22.10.0	22.10.0	
typing-extensions	4.6.3	4.6.3	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3	4.6.3	4.6.3
tzdata	2023c	2023c	2023c	2023c
uc-micro-py	1.0.1		1.0.1	
ujson	5.4.0	5.4.0		
unidecode	1.2.0	1.2.0		
unixodbc	2.3.11	2.3.11	2.3.11	2.3.11
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1	2.6.1	
w3lib	1.21.0	1.21.0	1.21.0	
watchdog	2.1.6	2.1.6		
wcwidth	0.2.5	0.2.5	0.2.5	0.2.5

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
webencodings	0.5.1	0.5.1	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2		
wheel	0.38.4	0.38.4	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5	4.0.5	4.0.5
wrapt	1.14.1	1.14.1	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2		
xarray	2022.11.0	2022.11.0	2022.11.0	
xxhash	0.8.0	0.8.0		
xyzservices	2022.9.0		2022.9.0	
xz	5.4.2	5.4.2	5.4.2	5.4.2
y-py	0.5.9	0.5.9	0.5.9	
yaml	0.2.5	0.2.5	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
yapf	0.31.0	0.31.0		
yarl	1.8.1	1.8.1	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2	0.8.2	
zeromq	4.3.4	4.3.4	4.3.4	4.3.4
zfp	0.5.5		0.5.5	
zict	2.2.0	2.2.0	2.2.0	2.2.0
zipp	3.11.0	3.11.0	3.11.0	3.11.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7	2.0.7	
zope	1.0	1.0	1.0	
zope.interface	5.4.0	5.4.0	5.4.0	
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
_anaconda_depends	2023.07	2023.07
abseil-cpp	20211102.0	20211102.0
aiobotocore	2.5.0	2.4.2
aiofiles	22.1.0	22.1.0
aiohttp	3.8.3	3.8.3
aioitertools	0.7.1	0.7.1
aiosignal	1.2.0	1.2.0
aiosqlite	0.18.0	0.18.0
alabaster	0.7.12	0.7.12
anaconda-catalogs	0.2.0	0.2.0
anaconda-client	1.11.3	1.11.3
anaconda-navigator	2.4.2	2.4.2
anaconda-project	0.11.1	0.11.1
anyio	3.5.0	3.5.0
appdirs	1.4.4	1.4.4
applaunchservices	0.3.0	0.3.0

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Package Name	osx-arm64	osx-64
appnope	0.1.2	0.1.2
appscript	1.1.2	1.1.2
argon2-cffi	21.3.0	21.3.0
argon2-cffi-bindings	21.2.0	21.2.0
arrow	1.2.3	1.2.3
arrow-cpp	11.0.0	11.0.0
astroid	2.14.2	2.14.2
astropy	5.1	5.1
asttokens	2.0.5	2.0.5
async-timeout	4.0.2	4.0.2
atomicwrites	1.4.0	1.4.0
attrs	22.1.0	22.1.0
automat	20.2.0	20.2.0
autopep8	1.6.0	1.6.0
aws-c-common	0.6.8	0.4.57
aws-c-event-stream	0.1.6	0.1.6
aws-checksums	0.1.11	0.1.9
aws-sdk-cpp	1.8.185	1.8.185
babel	2.11.0	2.11.0
backcall	0.2.0	0.2.0
backports	1.1	1.1
backports.functools_lru_cache	1.6.4	1.6.4
backports.tempfile	1.0	1.0
backports.weakref	1.0.post1	1.0.post1
bcrypt	3.2.0	3.2.0
beautifulsoup4	4.12.2	4.12.2
binaryornot	0.4.4	0.4.4
black	23.3.0	23.3.0
blas	1.0	1.0
bleach	4.1.0	4.1.0
blosc	1.21.3	1.21.3
bokeh	3.1.1	3.1.1
boltons	23.0.0	23.0.0
boost-cpp	1.73.0	1.73.0
boto3		1.24.28
botocore	1.29.76	1.27.59
bottleneck	1.3.5	1.3.5
brotli	1.0.9	1.0.9
brotli-bin	1.0.9	1.0.9
brotlipy	0.7.0	0.7.0
brunsli	0.1	0.1
bzip2	1.0.8	1.0.8
c-ares	1.19.0	1.19.0
c-blosc2	2.8.0	2.8.0
ca-certificates	2023.05.30	2023.05.30
cctools	949.0.1	949.0.1
cctools_osx-64		949.0.1
cctools_osx-arm64	949.0.1	
certifi	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1

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Package Name	osx-arm64	osx-64
cfitsio	3.470	3.470
chardet	4.0.0	4.0.0
charls	2.2.0	2.2.0
charset-normalizer	2.0.4	2.0.4
click	8.0.4	8.0.4
cloudpickle	2.2.1	2.2.1
clyent	1.2.2	1.2.2
colorama	0.4.6	0.4.6
colorcet	3.0.1	3.0.1
comm	0.1.2	0.1.2
conda	23.5.0	23.5.0
conda-build	3.25.0	3.25.0
conda-content-trust	0.1.3	0.1.3
conda-index	0.2.3	0.2.3
conda-libmamba-solver	23.5.0	23.5.0
conda-pack	0.6.0	0.6.0
conda-package-handling	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0
conda-repo-cli	1.0.41	1.0.41
conda-token	0.4.0	0.4.0
conda-verify	3.4.2	3.4.2
constantly	15.1.0	15.1.0
contourpy	1.0.5	1.0.5
cookiecutter	1.7.3	1.7.3
cryptography	39.0.1	39.0.1
cssselect	1.1.0	1.1.0
curl	8.1.1	8.1.1
cycler	0.11.0	0.11.0
cytoolz	0.12.0	0.12.0
dask	2023.6.0	2023.6.0
dask-core	2023.6.0	2023.6.0
datasets	2.12.0	
datashader	0.15.0	0.15.0
datashape	0.5.4	0.5.4
debugpy	1.5.1	1.5.1
decorator	5.1.1	5.1.1
defusedxml	0.7.1	0.7.1
diff-match-patch	20200713	20200713
dill	0.3.6	0.3.6
distributed	2023.6.0	2023.6.0
docstring-to-markdown	0.11	0.11
docutils	0.18.1	0.18.1
entrypoints	0.4	0.4
et_xmlfile	1.1.0	1.1.0
executing	0.8.3	0.8.3
filelock	3.9.0	3.9.0
flake8	6.0.0	6.0.0
flask	2.2.2	2.2.2
fmt	9.1.0	9.1.0
fonttools	4.25.0	4.25.0

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Table 27 – continued from previous page

Package Name	osx-arm64	osx-64
freetype	2.12.1	2.12.1
frozenlist	1.3.3	1.3.3
fsspec	2023.4.0	2023.3.0
future	0.18.3	0.18.3
gensim	4.3.0	4.3.0
gettext	0.21.0	0.21.0
gflags	2.2.2	2.2.2
giflib	5.2.1	5.2.1
glib	2.69.1	2.69.1
glob2	0.7	0.7
glog	0.5.0	0.5.0
gmp	6.2.1	6.2.1
gmpy2	2.1.2	2.1.2
greenlet	2.0.1	2.0.1
grpc-cpp	1.46.1	1.46.1
gst-plugins-base	1.14.1	1.14.1
gstreamer	1.14.1	1.14.1
h5py	3.7.0	3.7.0
hdf5	1.12.1	1.10.6
heapdict	1.0.1	1.0.1
holoviews	1.16.2	1.16.2
huggingface_hub	0.15.1	
hvplot	0.8.4	0.8.4
hyperlink	21.0.0	21.0.0
icu	68.1	58.2
idna	3.4	3.4
imagecodecs	2021.8.26	2021.8.26
imageio	2.31.1	2.31.1
imagesize	1.4.1	1.4.1
imbalanced-learn	0.10.1	0.10.1
importlib-metadata	6.0.0	6.0.0
importlib_metadata	6.0.0	6.0.0
incremental	21.3.0	21.3.0
inflection	0.5.1	0.5.1
iniconfig	1.1.1	1.1.1
intake	0.6.8	0.6.8
intervaltree	3.1.0	3.1.0
ipykernel	6.19.2	6.19.2
ipython	8.12.0	8.12.0
ipython_genutils	0.2.0	0.2.0
ipywidgets	8.0.4	8.0.4
isort	5.9.3	5.9.3
itemadapter	0.3.0	0.3.0
itemloaders	1.0.4	1.0.4
itsdangerous	2.0.1	2.0.1
jaraco.classes	3.2.1	3.2.1
jedi	0.18.1	0.18.1
jellyfish	0.9.0	0.9.0
jinja2	3.1.2	3.1.2
jinja2-time	0.2.0	0.2.0

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Package Name	osx-arm64	osx-64
jmespath	0.10.0	0.10.0
joblib	1.2.0	1.2.0
jpeg	9e	9e
jq	1.6	1.6
json5	0.9.6	0.9.6
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
jsonschema	4.17.3	4.17.3
jupyter	1.0.0	1.0.0
jupyter_client	8.1.0	8.1.0
jupyter_console	6.6.3	6.6.3
jupyter_core	5.3.0	5.3.0
jupyter_events	0.6.3	0.6.3
jupyter_server	2.5.0	2.5.0
jupyter_server_fileid	0.9.0	0.9.0
jupyter_server_terminals	0.4.4	0.4.4
jupyter_server_ydoc	0.8.0	0.8.0
jupyter_ydoc	0.2.4	0.2.4
jupyterlab	3.6.3	3.6.3
jupyterlab_pygments	0.1.2	0.1.2
jupyterlab_server	2.22.0	2.22.0
jupyterlab_widgets	3.0.5	3.0.5
jxrlib	1.1	1.1
keyring	23.13.1	23.13.1
kiwisolver	1.4.4	1.4.4
krb5	1.19.4	1.19.4
lazy-object-proxy	1.6.0	1.6.0
lazy_loader	0.2	0.2
lcms2	2.12	2.12
ld64	530	530
ld64_osx-64		530
ld64_osx-arm64	530	
ldid	2.1.5	2.1.5
lerc	3.0	3.0
libaec	1.0.4	1.0.4
libarchive	3.6.2	3.6.2
libboost	1.73.0	1.73.0
libbrotlicommon	1.0.9	1.0.9
libbrotlidec	1.0.9	1.0.9
libbrotlienc	1.0.9	1.0.9
libclang	14.0.6	14.0.6
libclang13	14.0.6	14.0.6
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6
libdeflate	1.17	1.17
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libevent	2.1.12	2.1.12
libffi	3.4.4	3.4.4
libgfortran	5.0.0	5.0.0

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Package Name	osx-arm64	osx-64
libgfortran5	11.3.0	11.3.0
libiconv	1.16	1.16
liblief	0.12.3	0.12.3
libllvm14	14.0.6	14.0.6
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0
libopenblas	0.3.21	0.3.21
libpng	1.6.39	1.6.39
libpq	12.9	12.9
libprotobuf	3.20.3	3.20.3
libsodium	1.0.18	1.0.18
libsolv	0.7.22	0.7.22
libspatialindex	1.9.3	1.9.3
libssh2	1.10.0	1.10.0
libthrift	0.13.0	0.15.0
libtiff	4.5.0	4.5.0
libuv	1.44.2	
libwebp	1.2.4	1.2.4
libwebp-base	1.2.4	1.2.4
libxml2	2.10.3	2.10.3
libxslt	1.1.37	1.1.37
libzopfli	1.0.3	1.0.3
linkify-it-py	2.0.0	2.0.0
llvm-openmp	14.0.6	14.0.6
llvmlite	0.40.0	0.40.0
locket	1.0.0	1.0.0
lxml	4.9.2	4.9.2
lz4	4.3.2	4.3.2
lz4-c	1.9.4	1.9.4
lzo	2.10	2.10
markdown	3.4.1	3.4.1
markdown-it-py	2.2.0	2.2.0
markupsafe	2.1.1	2.1.1
matplotlib	3.7.1	3.7.1
matplotlib-base	3.7.1	3.7.1
matplotlib-inline	0.1.6	0.1.6
mccabe	0.7.0	0.7.0
mdit-py-plugins	0.3.0	0.3.0
mdurl	0.1.0	0.1.0
mistune	0.8.4	0.8.4
more-itertools	8.12.0	8.12.0
mpc	1.1.0	1.1.0
mpfr	4.0.2	4.0.2
mpmath	1.2.1	1.2.1
msgpack-python	1.0.3	1.0.3
multidict	6.0.2	6.0.2
multipledispatch	0.6.0	0.6.0
multiprocess	0.70.14	
munkres	1.1.4	1.1.4

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Package Name	osx-arm64	osx-64
mypy_extensions	0.4.3	0.4.3
navigator-updater	0.4.0	0.4.0
nbclassic	0.5.5	0.5.5
nbclient	0.5.13	0.5.13
nbconvert	6.5.4	6.5.4
nbformat	5.7.0	5.7.0
ncurses	6.4	6.4
nest-asyncio	1.5.6	1.5.6
networkx	2.8.4	2.8.4
ninja	1.10.2	
ninja-base	1.10.2	
nltk	3.7	3.7
notebook	6.5.4	6.5.4
notebook-shim	0.2.2	0.2.2
nspr	4.35	4.35
nss	3.89.1	3.89.1
numba	0.57.0	0.57.0
numexpr	2.8.4	2.8.4
numpy	1.24.3	1.24.3
numpy-base	1.24.3	1.24.3
numpydoc	1.5.0	1.5.0
oniguruma	6.9.7.1	6.9.7.1
openjpeg	2.3.0	2.4.0
openpyxl	3.0.10	3.0.10
openssl	1.1.1u	1.1.1u
orc	1.7.4	1.7.4
packaging	23.0	23.0
pandas	1.5.3	1.5.3
pandocfilters	1.5.0	1.5.0
panel	1.1.0	1.1.0
param	1.13.0	1.13.0
parsel	1.6.0	1.6.0
parso	0.8.3	0.8.3
partd	1.2.0	1.2.0
patch	2.7.6	2.7.6
pathlib	1.0.1	1.0.1
pathspec	0.10.3	0.10.3
patsy	0.5.3	0.5.3
pcre	8.45	8.45
pcre2	10.37	10.37
pep8	1.7.1	1.7.1
pexpect	4.8.0	4.8.0
pickleshare	0.7.5	0.7.5
pillow	9.4.0	9.4.0
pip	23.1.2	23.1.2
pkginfo	1.9.6	1.9.6
platformdirs	2.5.2	2.5.2
plotly	5.9.0	5.9.0
pluggy	1.0.0	1.0.0
ply	3.11	3.11

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Package Name	osx-arm64	osx-64
pooch	1.4.0	1.4.0
poyo	0.5.0	0.5.0
prometheus_client	0.14.1	0.14.1
prompt-toolkit	3.0.36	3.0.36
prompt_toolkit	3.0.36	3.0.36
protego	0.1.16	0.1.16
psutil	5.9.0	5.9.0
ptyprocess	0.7.0	0.7.0
pure_eval	0.2.2	0.2.2
py-cpuinfo	8.0.0	8.0.0
py-lief	0.12.3	0.12.3
pyarrow	11.0.0	11.0.0
pyasn1	0.4.8	0.4.8
pyasn1-modules	0.2.8	0.2.8
pybind11-abi	4	4
pycodestyle	2.10.0	2.10.0
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyct	0.5.0	0.5.0
pycurl	7.45.2	7.45.2
pydispatcher	2.0.5	2.0.5
pydocstyle	6.3.0	6.3.0
pyerfa	2.0.0	2.0.0
pyflakes	3.0.1	3.0.1
pygments	2.15.1	2.15.1
pyjwt	2.4.0	2.4.0
pylint	2.16.2	2.16.2
pylint-venv	2.3.0	2.3.0
pyls-spyder	0.4.0	0.4.0
pyobjc-core	9.0	9.0
pyobjc-framework-cocoa	9.0	9.0
pyobjc-framework-coreservices	9.0	9.0
pyobjc-framework-fsevents	9.0	9.0
pyodbc	4.0.34	4.0.34
pyopenssl	23.0.0	23.0.0
pyparsing	3.0.9	3.0.9
pyqt	5.15.7	5.15.7
pyqt5-sip	12.11.0	12.11.0
pyqtwebengine	5.15.7	5.15.7
pyrsistent	0.18.0	0.18.0
pysocks	1.7.1	1.7.1
pytables	3.8.0	3.8.0
pytest	7.3.1	7.3.1
python	3.11.3	3.11.3
python-dateutil	2.8.2	2.8.2
python-fastjsonschema	2.16.2	2.16.2
python-json-logger	2.0.7	2.0.7
python-libarchive-c	2.9	2.9
python-lmdb	1.4.1	1.4.1
python-lsp-black	1.2.1	1.2.1

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Package Name	osx-arm64	osx-64
python-lsp-jsonrpc	1.0.0	1.0.0
python-lsp-server	1.7.2	1.7.2
python-slugify	5.0.2	5.0.2
python-snappy	0.6.1	0.6.1
python-xxhash	2.0.2	
python.app	3	3
pytoolconfig	1.2.5	1.2.5
pytorch	2.0.1	
pytz	2022.7	2022.7
pyviz_comms	2.3.0	2.3.0
pywavelets	1.4.1	1.4.1
pyyaml	6.0	6.0
pyzmq	25.1.0	25.1.0
qdarkstyle	3.0.2	3.0.2
qstylizer	0.2.2	0.2.2
qt-main	5.15.2	5.15.2
qt-webengine	5.15.9	5.15.9
qtawesome	1.2.2	1.2.2
qtconsole	5.4.2	5.4.2
qtpy	2.2.0	2.2.0
qtwebkit	5.212	5.212
queuelib	1.5.0	1.5.0
re2	2022.04.01	2022.04.01
readline	8.2	8.2
regex	2022.7.9	2022.7.9
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.29.0	2.29.0
requests-file	1.5.1	1.5.1
requests-toolbelt	0.9.1	0.9.1
responses	0.13.3	
rfc3339-validator	0.1.4	0.1.4
rfc3986-validator	0.1.1	0.1.1
rope	1.7.0	1.7.0
rtree	1.0.1	1.0.1
ruamel.yaml	0.17.21	0.17.21
ruamel_yaml	0.17.21	0.17.21
s3fs	2023.4.0	2023.3.0
s3transfer		0.6.0
sacremoses	0.0.43	0.0.43
scikit-image	0.20.0	0.20.0
scikit-learn	1.2.2	1.2.2
scipy	1.10.1	1.10.1
scrapy	2.8.0	2.8.0
seaborn	0.12.2	0.12.2
send2trash	1.8.0	1.8.0
service_identity	18.1.0	18.1.0
setuptools	67.8.0	67.8.0
sip	6.6.2	6.6.2
six	1.16.0	1.16.0

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Package Name	osx-arm64	osx-64
sleef	3.5.1	
smart_open	5.2.1	5.2.1
snappy	1.1.9	1.1.9
sniffio	1.2.0	1.2.0
snowballstemmer	2.2.0	2.2.0
sortedcontainers	2.4.0	2.4.0
soupsieve	2.4	2.4
sphinx	5.0.2	5.0.2
sphinxcontrib-applehelp	1.0.2	1.0.2
sphinxcontrib-devhelp	1.0.2	1.0.2
sphinxcontrib-htmlhelp	2.0.0	2.0.0
sphinxcontrib-jsmath	1.0.1	1.0.1
sphinxcontrib-qthelp	1.0.3	1.0.3
sphinxcontrib-serializinghtml	1.1.5	1.1.5
spyder	5.4.3	5.4.3
spyder-kernels	2.4.3	2.4.3
sqlalchemy	1.4.39	1.4.39
sqlite	3.41.2	3.41.2
stack_data	0.2.0	0.2.0
statsmodels	0.13.5	0.13.5
sympy	1.11.1	1.11.1
tabulate	0.8.10	0.8.10
tapi	1100.0.11	1000.10.8
tbb	2021.8.0	2021.8.0
tbb4py	2021.8.0	2021.8.0
tblib	1.7.0	1.7.0
tenacity	8.2.2	8.2.2
terminado	0.17.1	0.17.1
text-unidecode	1.3	1.3
textdistance	4.2.1	4.2.1
threadpoolctl	2.2.0	2.2.0
three-merge	0.1.1	0.1.1
tiffile	2021.7.2	2021.7.2
tinycss2	1.2.1	1.2.1
tk	8.6.12	8.6.12
tldextract	3.2.0	3.2.0
tokenizers	0.13.2	
toml	0.10.2	0.10.2
tomli	2.0.1	2.0.1
tomlkit	0.11.1	0.11.1
toolz	0.12.0	0.12.0
tornado	6.2	6.2
tqdm	4.65.0	4.65.0
traitlets	5.7.1	5.7.1
transformers	4.29.2	2.1.1
twisted	22.10.0	22.10.0
typing-extensions	4.6.3	4.6.3
typing_extensions	4.6.3	4.6.3
tzdata	2023c	2023c
uc-micro-py	1.0.1	1.0.1

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Package Name	osx-arm64	osx-64
ujson	5.4.0	5.4.0
unidecode	1.2.0	1.2.0
unixodbc	2.3.11	2.3.11
urllib3	1.26.16	1.26.16
utf8proc	2.6.1	2.6.1
w3lib	1.21.0	1.21.0
watchdog	2.1.6	2.1.6
wcwidth	0.2.5	0.2.5
webencodings	0.5.1	0.5.1
websocket-client	0.58.0	0.58.0
werkzeug	2.2.3	2.2.3
whatthepatch	1.0.2	1.0.2
wheel	0.38.4	0.38.4
widgetsnbextension	4.0.5	4.0.5
wrapt	1.14.1	1.14.1
wurlitzer	3.0.2	3.0.2
xarray	2022.11.0	2022.11.0
xlwings	0.29.1	0.29.1
xxhash	0.8.0	
xyzservices	2022.9.0	2022.9.0
xz	5.4.2	5.4.2
y-py	0.5.9	0.5.9
yaml	0.2.5	0.2.5
yaml-cpp	0.7.0	0.7.0
yapf	0.31.0	0.31.0
yarl	1.8.1	1.8.1
ypy-websocket	0.8.2	0.8.2
zeromq	4.3.4	4.3.4
zfp	0.5.5	0.5.5
zict	2.2.0	2.2.0
zipp	3.11.0	3.11.0
zlib	1.2.13	1.2.13
zlib-ng	2.0.7	2.0.7
zope	1.0	1.0
zope.interface	5.4.0	5.4.0
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
_anaconda_depends	2023.07
abseil-cpp	20211102.0
aiobotocore	2.4.2
aiofiles	22.1.0
aiohttp	3.8.3
aioitertools	0.7.1
aiosignal	1.2.0

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Package Name	win-64
aiosqlite	0.18.0
alabaster	0.7.12
anaconda-catalogs	0.2.0
anaconda-client	1.11.3
anaconda-navigator	2.4.2
anaconda-project	0.11.1
anyio	3.5.0
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	11.0.0
astroid	2.14.2
astropy	5.1
asttokens	2.0.5
async-timeout	4.0.2
atomicwrites	1.4.0
attrs	22.1.0
automat	20.2.0
autopep8	1.6.0
aws-c-common	0.4.57
aws-c-event-stream	0.1.6
aws-checksums	0.1.9
aws-sdk-cpp	1.8.185
babel	2.11.0
backcall	0.2.0
backports	1.1
backports.functools_lru_cache	1.6.4
backports.tempfile	1.0
backports.weakref	1.0.post1
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	23.3.0
blas	1.0
bleach	4.1.0
blosc	1.21.3
bokeh	3.1.1
boltons	23.0.0
boost-cpp	1.73.0
boto3	1.24.28
botocore	1.27.59
bottleneck	1.3.5
brotli	1.0.9
brotli-bin	1.0.9
brotlipy	0.7.0
bzip2	1.0.8
c-ares	1.19.0
c-blosc2	2.8.0
ca-certificates	2023.05.30

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Package Name	win-64
certifi	2023.5.7
cffi	1.15.1
cfitsio	3.470
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.0.4
cloudpickle	2.2.1
clyent	1.2.2
colorama	0.4.6
colorcet	3.0.1
comm	0.1.2
conda	23.5.0
conda-build	3.25.0
conda-content-trust	0.1.3
conda-index	0.2.3
conda-libmamba-solver	23.5.0
conda-pack	0.6.0
conda-package-handling	2.1.0
conda-package-streaming	0.8.0
conda-repo-cli	1.0.41
conda-token	0.4.0
conda-verify	3.4.2
console_shortcut	0.1.1
constantly	15.1.0
contourpy	1.0.5
cookiecutter	1.7.3
cryptography	39.0.1
cssselect	1.1.0
curl	8.1.1
cycler	0.11.0
cytoolz	0.12.0
daal4py	2023.1.1
dal	2023.1.1
dask	2023.6.0
dask-core	2023.6.0
datashader	0.15.0
datashape	0.5.4
debugpy	1.5.1
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.6
distributed	2023.6.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0
executing	0.8.3
filelock	3.9.0

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Package Name	win-64
flake8	6.0.0
flask	2.2.2
fmt	9.1.0
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.3.3
fsspec	2023.3.0
future	0.18.3
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
glib	2.69.1
glob2	0.7
glog	0.5.0
greenlet	2.0.1
gst-plugins-base	1.18.5
gstreamer	1.18.5
h5py	3.7.0
hdf5	1.10.6
heapdict	1.0.1
holoviews	1.16.2
hvplot	0.8.4
hyperlink	21.0.0
icc_rt	2022.1.0
icu	58.2
idna	3.4
imagecodecs	2021.8.26
imageio	2.26.0
imagesize	1.4.1
imbalanced-learn	0.10.1
importlib-metadata	6.0.0
importlib_metadata	6.0.0
incremental	21.3.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.19.2
ipython	8.12.0
ipython_genutils	0.2.0
ipywidgets	8.0.4
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.0.4
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jellyfish	0.9.0
jinja2	3.1.2

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Package Name	win-64
jinja2-time	0.2.0
jmespath	0.10.0
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.32
jsonpointer	2.1
jsonschema	4.17.3
jupyter	1.0.0
jupyter_client	8.1.0
jupyter_console	6.6.3
jupyter_core	5.3.0
jupyter_events	0.6.3
jupyter_server	2.5.0
jupyter_server_fileid	0.9.0
jupyter_server_terminals	0.4.4
jupyter_server_ydoc	0.8.0
jupyter_ydoc	0.2.4
jupyterlab	3.6.3
jupyterlab_pygments	0.1.2
jupyterlab_server	2.22.0
jupyterlab_widgets	3.0.5
jxrlib	1.1
keyring	23.13.1
kiwisolver	1.4.4
krb5	1.19.4
lazy-object-proxy	1.6.0
lazy_loader	0.2
lcms2	2.12
lerc	3.0
libaec	1.0.4
libarchive	3.6.2
libboost	1.73.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcurl	8.1.1
libdeflate	1.17
libevent	2.1.12
libffi	3.4.4
libiconv	1.16
liblief	0.12.3
libllvm14	14.0.6
libmamba	1.4.1
libmambapy	1.4.1
libogg	1.3.5
libpng	1.6.39

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Package Name	win-64
libprotobuf	3.20.3
libsodium	1.0.18
libsolv	0.7.22
libspatialindex	1.9.3
libssh2	1.10.0
libthrift	0.15.0
libtiff	4.5.0
libvorbis	1.3.7
libwebp	1.2.4
libwebp-base	1.2.4
libxml2	2.10.3
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.40.0
locket	1.0.0
lxml	4.9.2
lz4	4.3.2
lz4-c	1.9.4
lzo	2.10
m2-msys2-runtime	2.5.0.17080.65c939c
m2-patch	2.7.5
m2w64-libwinpthread-git	5.0.0.4634.697f757
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.1
matplotlib	3.7.1
matplotlib-base	3.7.1
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
menuinst	1.4.19
mistune	0.8.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.6
mkl_random	1.2.2
more-itertools	8.12.0
mpmath	1.2.1
msgpack-python	1.0.3
msys2-conda-epoch	20160418
multidict	6.0.2
multipledispatch	0.6.0
munkres	1.1.4
mypy_extensions	0.4.3
navigator-updater	0.4.0
nbclassic	0.5.5
nbclient	0.5.13
nbconvert	6.5.4

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Package Name	win-64
nbformat	5.7.0
nest-asyncio	1.5.6
networkx	2.8.4
nltk	3.7
notebook	6.5.4
notebook-shim	0.2.2
numba	0.57.0
numexpr	2.8.4
numpy	1.24.3
numpy-base	1.24.3
numpydoc	1.5.0
openjpeg	2.4.0
openpyxl	3.0.10
openssl	1.1.1u
orc	1.7.4
packaging	23.0
pandas	1.5.3
pandocfilters	1.5.0
panel	1.1.0
param	1.13.0
paramiko	2.8.1
parsel	1.6.0
parso	0.8.3
partd	1.2.0
pathlib	1.0.1
pathspec	0.10.3
patsy	0.5.3
pcre	8.45
pcre2	10.37
pep8	1.7.1
pexpect	4.8.0
pickleshare	0.7.5
pillow	9.4.0
pip	23.1.2
pkginfo	1.9.6
platformdirs	2.5.2
plotly	5.9.0
pluggy	1.0.0
ply	3.11
pooch	1.4.0
powershell_shortcut	0.0.1
poyo	0.5.0
prometheus_client	0.14.1
prompt-toolkit	3.0.36
prompt_toolkit	3.0.36
protego	0.1.16
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	8.0.0

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Package Name	win-64
py-lief	0.12.3
pyarrow	11.0.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pybind11-abi	4
pycodestyle	2.10.0
pycosat	0.6.4
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	2.3.0
pyls-spyder	0.4.0
pynacl	1.5.0
pyodbc	4.0.34
pyopenssl	23.0.0
pyparsing	3.0.9
pyqt	5.15.7
pyqt5-sip	12.11.0
pyqtwebengine	5.15.7
pyrsistent	0.18.0
pysocks	1.7.1
pytables	3.8.0
pytest	7.3.1
python	3.11.3
python-dateutil	2.8.2
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-libarchive-c	2.9
python-lmdb	1.4.1
python-lsp-black	1.2.1
python-lsp-jsonrpc	1.0.0
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
pytoolconfig	1.2.5
pytz	2022.7
pyviz_comms	2.3.0
pywavelets	1.4.1
pywin32	305
pywin32-ctypes	0.2.0
pywinpty	2.0.10
pyyaml	6.0
pyzmq	25.1.0

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Package Name	win-64
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.2.0
qtwebkit	5.212
queuelib	1.5.0
re2	2022.04.01
regex	2022.7.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.29.0
requests-file	1.5.1
requests-toolbelt	0.9.1
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rope	1.7.0
rtree	1.0.1
ruamel.yaml	0.17.21
ruamel_yaml	0.17.21
s3fs	2023.3.0
s3transfer	0.6.0
sacremoses	0.0.43
scikit-image	0.20.0
scikit-learn	1.2.2
scikit-learn-intelex	2023.1.1
scipy	1.10.1
scrapy	2.8.0
seaborn	0.12.2
send2trash	1.8.0
service_identity	18.1.0
setuptools	67.8.0
sip	6.6.2
six	1.16.0
smart_open	5.2.1
snappy	1.1.9
sniffio	1.2.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.4
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializinghtml	1.1.5
spyder	5.4.3

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Package Name	win-64
spyder-kernels	2.4.3
sqlalchemy	1.4.39
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.13.5
sympy	1.11.1
tabulate	0.8.10
tbb	2021.8.0
tbb4py	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2021.7.2
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.2
tqdm	4.65.0
traitlets	5.7.1
transformers	2.1.1
twisted	22.10.0
twisted-iocpsupport	1.0.2
typing-extensions	4.6.3
typing_extensions	4.6.3
tzdata	2023c
uc-micro-py	1.0.1
ujson	5.4.0
unidecode	1.2.0
urllib3	1.26.16
utf8proc	2.6.1
vc	14.2
vs2015_runtime	14.27.29016
w3lib	1.21.0
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	0.58.0
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.38.4
widgetsnbextension	4.0.5
win_inet_pton	1.1.0

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Package Name	win-64
winpty	0.4.3
wrapt	1.14.1
xarray	2022.11.0
xlwings	0.29.1
xyzservices	2022.9.0
xz	5.4.2
y-py	0.5.9
yaml	0.2.5
yaml-cpp	0.7.0
yapf	0.31.0
yarl	1.8.1
ypy-websocket	0.8.2
zeromq	4.3.4
zfp	0.5.5
zict	2.2.0
zipp	3.11.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1.0
zope.interface	5.4.0
zstandard	0.19.0
zstd	1.5.5

Anaconda 2023.03-1 (Apr 24, 2023)

User-facing changes

- Conda has been updated to v23.3.1.

Bug fixes

- Drop the "py310" string from the installer filename (caused problems for downstream package managers e.g. WinGet). (Issue 13161)
- For Windows, enable allowance of spaces in the installation path. (Issue 13163)

Anaconda 2023.03-0 (Mar 20, 2023)

User-facing changes

- Conda has been updated to v23.1.0.
- This installer uses python-3.10.9.
- Anaconda Navigator has been updated to v2.4.0.
- Version numbers for Anaconda Distribution will now include a build number to track any changes to the distribution that occur before the next official release.

Major package updates:

- daal4py 2021.6.0 -> 2023.0.2
- datashader 0.14.1 -> 0.14.4
- holoviews 1.15.0 -> 1.15.4
- ipython 7.31.1 -> 8.10.0
- jupyter_console 6.4.3 -> 6.6.2
- jupyter_core 4.11.1 -> 5.2.0
- jupyter_server 1.18.1 -> 1.23.4
- jupyterlab 3.4.4 -> 3.5.3
- jupyterlab_server 2.10.3 -> 2.19.0
- matplotlib 3.5.2 -> 3.7.0
- numba 0.55.1 -> 0.56.4
- numpy 1.21.5 -> 1.23.5
- pandas 1.4.4 -> 1.5.3
- pillow 9.2.0 -> 9.4.0
- python 3.10.4 -> 3.10.9
- scikit-image 0.19.2 -> 0.19.3
- scikit-learn 1.0.2 -> 1.2.1
- scipy 1.9.1 -> 1.10.0
- seaborn 0.11.2 -> 0.12.2
- spyder 5.3.3 -> 5.4.1
- spyder-kernels 2.3.3 -> 2.4.1
- statsmodels 0.13.2 -> 0.13.5
- sympy 1.10.1 -> 1.11.1

Removed:

- anaconda-client
- anaconda-project
- conda-content-trust
- conda-token

Packages

Anaconda 2023.03-0 for 64-bit Windows with Python 3.10

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-navigator	2.4.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.3	Better dates & times for Python / Apache-2.0
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Cla
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing cl
automat	20.2.0	self-service finite-state machines for the programmer on the go / M
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PE
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browse
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossl
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and activ
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSI
conda	23.1.0	OS-agnostic, system-level binary package and environment manage
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clau
constantly	15.1.0	Symbolic constants in Python / MIT

Name	Version	Summary / License
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. /
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (pr
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional util
daal4py	2023.0.2	A convenient Python API to Intel (R) oneAPI Data Analytics Libra
dal	2023.0.1	Intel® oneDAL runtime libraries / Intel Simplified Software Licens
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MI
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docstring-to-markdown	0.11	On the fly conversion of Python docstrings to markdown / LGPL-2
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Do
entrypoints	0.4	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT A
executing	0.8.3	Get the currently executing AST node of a frame, and other informa
filelock	3.9.0	A platform independent file lock. / Unlicense
flake8	6.0.0	Your Tool For Style Guide Enforcement / MIT
flask	2.2.2	A simple framework for building complex web applications. / BSD
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / M
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applicati
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.18.5	GStreamer Base Plug-ins / GPL2
gstreamer	1.18.5	Library for constructing graphs of media-handling components / LG
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and mana
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itsel
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other r
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloV
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2022.1.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / B
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Claus

Name	Version	Summary / License
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. /
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BS
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors.
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. /
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. /
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clau
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted s
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solve
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	12.0.0	Development headers and libraries for Clang / Apache-2.0 WITH L
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compr

Name	Version	Summary / License
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot co
libogg	1.3.5	OGG media container / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.44.2	Cross-platform asynchronous I/O / MIT
libvorbis	1.3.7	Vorbis audio format / BSD-3-Clause
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / B
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Claus
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-libwinpthread-git	5.0.0.4634.697f757	MinGW-w64 winpthreads library / MIT, BSD
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clau
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
menuinst	1.4.19	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the M
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with th
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's Exe
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks /
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0

Name	Version	Summary / License
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-
numpydoc	1.5.0	Sphinx extension to support docstrings in Numpy format / BSD-3-C
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis too
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Cl
param	1.12.3	Param: Make your Python code clearer and more reliable by declar
paramiko	2.8.1	SSH2 protocol library / LGPL-2.1-or-later
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
pathspec	0.10.3	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / B
pcre	8.45	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-speci
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / M
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventio
psutil	5.9.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.10.0	Python style guide checker / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BS
pydocstyle	6.3.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause

Name	Version	Summary / License
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code ho
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pylint-venv	2.3.0	pylint-venv provides a Pylint init-hook to use the same Pylint instal
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.5.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Claus
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protoc
python-lsp-server	1.7.1	An implementation of the Language Server Protocol for Python / M
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.1	Python library for the snappy compression library from Google / B
pytoolconfig	1.2.5	Python tool configuration / LGPL-3.0-or-later
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPU
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pywin32	305	Python extensions for Windows / HPND AND BSD-3-Clause AND
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	2.0.10	Pseudoterminals for Windows in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-lat
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qstylizer	0.2.2	Qt stylesheet generation utility for PyQt/PySide / MIT
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-o
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-o
qtawesome	1.2.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.4.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built w
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	1.7.0	A python refactoring library / LGPL-3.0-or-later
rtree	1.0.1	R-Tree spatial index for Python GIS / MIT
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause

Name	Version	Summary / License
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BS
scikit-learn-intelex	2023.0.2	Intel(R) Extension for Scikit-learn is a seamless way to speed up yo
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages /
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautifu
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
spyder	5.4.1	The Scientific Python Development Environment / MIT
spyder-kernels	2.4.1	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database eng
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informati
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MI
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line ut
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works /
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdo
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Produc
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori

Name	Version	Summary / License
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlo
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
twisted-iocpsupport	1.0.2	An extension for use in the twisted I/O Completion Ports reactor. /
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bind
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and m
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character code
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch f
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Cl
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xlwings	0.29.1	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-
zfp	0.5.5	Library for compressed numerical arrays that support high throughp
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.11.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Z
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause

Anaconda 2023.03-0 for macOS on Apple M1 with Python 3.10

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-navigator	2.4.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop imp
appdirs	1.4.4	A small Python module for determining appropriate platform-specific d
applaunchservices	0.3.0	Simple package for registering an app with apple Launch Services to ha
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.3	Better dates & times for Python / Apache-2.0
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-o
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) wi
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classe
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-C
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Claus
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or tex
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faste
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. /
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. /
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause

Name	Version	Summary / License
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (projec
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (B
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD-3-C
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages th
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docstring-to-markdown	0.11	On the fly conversion of Python docstrings to markdown / LGPL-2.1-or
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domai
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND
executing	0.8.3	Get the currently executing AST node of a frame, and other information
filelock	3.9.0	A platform independent file lock. / Unlicense
flake8	6.0.0	Your Tool For Style Guide Enforcement / MIT
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-C
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and Lice
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
gettext	0.21.0	Internationalization package / GPL-2.0
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.12.1	HDF5 is a data model, library, and file format for storing and managing
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itself. / B
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloViews
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3-Cla

Name	Version	Summary / License
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MI
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / M
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSI
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS v
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like applicat
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sourc
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / B
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	12.0.0	Development headers and libraries for Clang / Apache-2.0 WITH LLVM
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libcxx	14.0.6	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compressi
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause

Name	Version	Summary / License
libev	4.33	A full-featured and high-performance event loop that is loosely modele
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgfortran	5.0.0	Fortran compiler and libraries from the GNU Compiler Collection / GP
libgfortran5	11.3.0	Fortran compiler and libraries from the GNU Compiler Collection / GP
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLV
libllvm12	12.0.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLV
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / M
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / Postg
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.44.2	Cross-platform asynchronous I/O / MIT
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow
llvm-openmp	14.0.6	The OpenMP API supports multi-platform shared-memory parallel pro
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / BSD-
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Claus
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C.
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-C
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point co
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkr
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the my
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's Execute
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause

Name	Version	Summary / License
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-
nss	3.74	A set of libraries designed to support cross-platform development of se
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-C
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-C
numpydoc	1.5.0	Sphinx extension to support docstrings in Numpy format / BSD-3-Clau
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protoc
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. /
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS sele
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
pathspec	0.10.3	Utility library for gitignore style pattern matching of file paths. / MPL-
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.45	Regular expression pattern matching using the same syntax and semant
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. /
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / License
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific d
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BS
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions /
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.10.0	Python style guide checker / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause

Name	Version	Summary / License
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD-3
pydocstyle	6.3.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hostin
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pylint-venv	2.3.0	pylint-venv provides a Pylint init-hook to use the same Pylint installatio
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyobjc-core	9.0	Python<->ObjC Interoperability Module / MIT
pyobjc-framework-cocoa	9.0	Wrappers for the Cocoa frameworks on Mac OS X / MIT
pyobjc-framework-coreservices	9.0	Wrappers for the “CoreServices” framework on macOS. / MIT
pyobjc-framework-fsevents	9.0	Wrappers for the framework FSEvents on macOS / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySo
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amou
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause an
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. /
python-lsp-server	1.7.1	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop
pytoolconfig	1.2.5	Python tool configuration / LGPL-3.0-or-later
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs an
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5,
qstylizer	0.2.2	Qt stylesheet generation utility for PyQt/PySide / MIT
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.2.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.4.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute Java
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD

Name	Version	Summary / License
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with .
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	1.7.0	A python refactoring library / LGPL-3.0-or-later
rtree	1.0.1	R-Tree spatial index for Python GIS / MIT
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all plat
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
sleef	3.5.1	SIMD library for evaluating elementary functions / BSL-1.0
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AN
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful doc
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp doc
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScrip
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docun
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “seri
spyder	5.4.1	The Scientific Python Development Environment / MIT
spyder-kernels	2.4.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative di
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Ap
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or m
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Cl
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and

Name	Version	Summary / License
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomain
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, origina
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow /
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more.
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. /
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files
wheel	0.38.4	A built-package format for Python. / MIT
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xlwings	0.29.1	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-la
zfp	0.5.5	Library for compressed numerical arrays that support high throughput r
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.11.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

Anaconda 2023.03-0 for macOS on Intel 64-bit with Python 3.10

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-navigator	2.4.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop imp
appdirs	1.4.4	A small Python module for determining appropriate platform-specific d
applaunchservices	0.3.0	Simple package for registering an app with apple Launch Services to ha
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.3	Better dates & times for Python / Apache-2.0
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-o
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) wi
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classe
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-C
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Claus
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or tex
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faste
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers.
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. /
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause

Name	Version	Summary / License
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (projec
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD-3-C
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages th
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docstring-to-markdown	0.11	On the fly conversion of Python docstrings to markdown / LGPL-2.1-or
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domai
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND
executing	0.8.3	Get the currently executing AST node of a frame, and other information
filelock	3.9.0	A platform independent file lock. / Unlicense
flake8	6.0.0	Your Tool For Style Guide Enforcement / MIT
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-C
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and Lice
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
gettext	0.21.0	Internationalization package / GPL-2.0
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itself. /
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloViews
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3-Cla

Name	Version	Summary / License
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MI
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / M
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSI
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BS
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS v
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like applicat
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sourc
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / B
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	12.0.0	Development headers and libraries for Clang / Apache-2.0 WITH LLVM

Name	Version	Summary / License
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libcxx	14.0.6	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compressi
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modele
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgfortran	5.0.0	Fortran compiler and libraries from the GNU Compiler Collection / GP
libgfortran5	11.3.0	Fortran compiler and libraries from the GNU Compiler Collection / GP
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLV
libllvm12	12.0.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLV
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / M
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / Postg
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.44.2	Cross-platform asynchronous I/O / MIT
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow
llvm-openmp	14.0.6	The OpenMP API supports multi-platform shared-memory parallel pro
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / BSD-
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Claus
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C.
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-C
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point co
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkr
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the my
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's Execute

Name	Version	Summary / License
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-
nss	3.74	A set of libraries designed to support cross-platform development of se
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-C
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-C
numpydoc	1.5.0	Sphinx extension to support docstrings in Numpy format / BSD-3-Clau
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protoc
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. /
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS sele
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
pathspec	0.10.3	Utility library for gitignore style pattern matching of file paths. / MPL-
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.45	Regular expression pattern matching using the same syntax and semant
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. /
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / License
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific d
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BS
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python / BS
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions /
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT

Name	Version	Summary / License
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.10.0	Python style guide checker / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD-3
pydocstyle	6.3.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hostin
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pylint-venv	2.3.0	pylint-venv provides a Pylint init-hook to use the same Pylint installatio
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyobjc-core	9.0	Python<->ObjC Interoperability Module / MIT
pyobjc-framework-cocoa	9.0	Wrappers for the Cocoa frameworks on Mac OS X / MIT
pyobjc-framework-coreservices	9.0	Wrappers for the “CoreServices” framework on macOS. / MIT
pyobjc-framework-fsevents	9.0	Wrappers for the framework FSEvents on macOS / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySo
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amou
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause an
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. /
python-lsp-server	1.7.1	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-3
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop
pytoolconfig	1.2.5	Python tool configuration / LGPL-3.0-or-later
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs an
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5,
qstylizer	0.2.2	Qt stylesheet generation utility for PyQt/PySide / MIT
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only

Name	Version	Summary / License
qtawesome	1.2.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.4.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute Java
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with .
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	1.7.0	A python refactoring library / LGPL-3.0-or-later
rtree	1.0.1	R-Tree spatial index for Python GIS / MIT
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all plat
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AN
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful doc
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp doc
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScrip
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docun
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “seri
spyder	5.4.1	The Scientific Python Development Environment / MIT
spyder-kernels	2.4.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative di
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Ap
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or m
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Cl

Name	Version	Summary / License
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomain
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, origina
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow /
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more.
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. /
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xlwings	0.29.1	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-la
zfp	0.5.5	Library for compressed numerical arrays that support high throughput r
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.11.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

Anaconda 2023.03-0 for 64-bit Linux on IBM Z CPUs with Python 3.10

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementa
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MI
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the po
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classes by reli
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-Clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faster than *m*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintain
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-Clause
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-C
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD-3-Claus
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-C
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities / BSD-3
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause

Table 32 – continued from previou

Name	Version	Summary / License
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
filelock	3.9.0	A platform independent file lock. / Unlicense
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-Clause
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-F
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / H
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-C
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos on the h
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Claus
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD-3-Cla
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / B
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSI
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-C

Table 32 – continued from previou

Name	Version	Summary / License
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.38	A set of programming tools for creating and managing binary programs, object
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and d
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after li
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-or
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and protoc,
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.41.5	Portable uuid C library 2.32.1 as pk-version 1.41.5. / BSD-3-Clause
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GP
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precisio
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computati
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algor

Table 32 – continued from previou

Name	Version	Summary / License
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreproce
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Claus
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protocols / Op
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.12.6	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring Paramete
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD-2-Claus
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g.
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD-3-Cla
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD-3-Cla
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Claus
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data, ...) / B
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forum
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pyodbc	4.0.34	DB API Module for ODBC / MIT-0

Table 32 – continued from previou

Name	Version	Summary / License
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for m
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amounts of da
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apach
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-3-Clause
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs and CPUs.
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apach
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. /
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT A
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine / blessing
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays /
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / Tc
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production / Apach
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause

Table 32 – continued from previou

Name	Version	Summary / License
tornado	6.1	A Python web framework and asynchronous networking library, originally devel
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow / Apache-
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-C
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more. / MIT
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-later and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2

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Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementa
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MI
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the po
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classes by reli
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-Clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faster than *m*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause

Name	Version	Summary / License
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintain
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-Clause
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-C
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD-3-Claus
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-C
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities / BSD-3
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
filelock	3.9.0	A platform independent file lock. / Unlicense
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-Clause
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-F
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later

Name	Version	Summary / License
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / H
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-C
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos on the h
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MIT
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Claus
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD-3-Cla
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like applications. / B
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSI
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-C
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.38	A set of programming tools for creating and managing binary programs, object
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause

Name	Version	Summary / License
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and d
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after li
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-or
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-excep
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and protoc,
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.41.5	Portable uuid C library 2.32.1 as pk-version 1.41.5. / BSD-3-Clause
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GP
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precisio
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computati
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algor
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreproce
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause

Name	Version	Summary / License
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Claus
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protocols / Op
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring Paramete
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / B
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD-2-Claus
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g.
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD-3-Cla
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD-3-Cla
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-C
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Claus
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data, ...) / B
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD-3-Clause
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause

Name	Version	Summary / License
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forum
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for m
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amounts of da
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apach
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-3-Clause
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs and CPUs.
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apach
requests-file	1.5.1	file transport adapter for Requests / Apache
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. /
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT A
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine / blessin
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays /
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause

Name	Version	Summary / License
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / Tc
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a U
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production / Apach
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally deve
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow / Apache-
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-C
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-later and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read and
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2

Anaconda 2023.03-0 for 64-bit Linux on ARMv8 CPUs with Python 3.10

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-navigator	2.4.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop impl
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.3	Better dates & times for Python / Apache-2.0
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classes
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-Cla
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text.
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. /
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless ar
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively m
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-C
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. / B
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause

Name	Version	Summary / License
constantly	15.1.0	Symbolic constants in Python / MIT
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD-3
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project t
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (BS
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities /
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD-3-Cl
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages tha
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docstring-to-markdown	0.11	On the fly conversion of Python docstrings to markdown / LGPL-2.1-or-l
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
executing	0.8.3	Get the currently executing AST node of a frame, and other information /
expat	2.4.9	Expat XML parser library in C / MIT
filelock	3.9.0	A platform independent file lock. / Unlicense
flake8	6.0.0	Your Tool For Style Guide Enforcement / MIT
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-Cla
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fontconfig	2.14.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and Licens
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itself. / BS
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos c
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloViews /
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT

Name	Version	Summary / License
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.7.1	Pure Python DBus interface / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.38	A set of programming tools for creating and managing binary programs,
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT

Name	Version	Summary / License
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	10.0.1	Development headers and libraries for Clang / Apache-2.0 WITH LLVM
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compressio
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled
libevent	2.1.12	An event notification library. / BSD-3-Clause
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MI
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.39	PNG reference library / Zlib
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / Postgre
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and p
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.41.5	Portable uuid C library 2.32.1 as pk-version 1.41.5. / BSD-3-Clause
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxcb	1.15	This is the C-language Binding (XCB) package to the X Window System
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Der
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Cla
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point con
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C

Name	Version	Summary / License
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkre
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the myp
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-2
nss	3.74	A set of libraries designed to support cross-platform development of secu
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Cla
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Cla
numpydoc	1.5.0	Sphinx extension to support docstrings in Numpy format / BSD-3-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring Pa
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selec
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
pathspec	0.10.3	Utility library for gitignore style pattern matching of file paths. / MPL-2.
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dir
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0

Name	Version	Summary / License
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / B
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.10.0	Python style guide checker / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data,
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD-3-C
pydocstyle	6.3.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pylint-venv	2.3.0	pylint-venv provides a Pylint init-hook to use the same Pylint installation
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / M
python-lsp-server	1.7.1	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-3-
pytoolconfig	1.2.5	Python tool configuration / LGPL-3.0-or-later
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs and
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qstylizer	0.2.2	Qt stylesheet generation utility for PyQt/PySide / MIT

Name	Version	Summary / License
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.2.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.4.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute JavaS
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . /
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	1.7.0	A python refactoring library / LGPL-3.0-or-later
rtree	1.0.1	R-Tree spatial index for Python GIS / MIT
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help h
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
spyder	5.4.1	The Scientific Python Development Environment / MIT
spyder-kernels	2.4.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine / b
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative disp
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. /
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apac
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause

Name	Version	Summary / License
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and T
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production /
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow / A
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR B
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings /
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more. /
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files /
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-la
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.11.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

Anaconda 2023.03-0 for 64-bit Linux with Python 3.10

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-navigator	2.4.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop impl
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.3	Better dates & times for Python / Apache-2.0
astroid	2.14.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	22.1.0	attrs is the Python package that will bring back the joy of writing classes
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.11.0	Utilities to internationalize and localize Python applications / BSD-3-Cla
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text.
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. /
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2023.01.10	Certificates for use with other packages. / MPL-2.0
certifi	2022.12.7	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / Other
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless ar
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively m
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
colorama	0.4.6	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.1	Collection of perceptually uniform colormaps / CC-BY-4.0
comm	0.1.2	Python Comm implementation for the Jupyter kernel protocol / BSD-3-C
conda	23.1.0	OS-agnostic, system-level binary package and environment manager. / B
conda-build	3.23.3	tools for building conda packages / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause

Name	Version	Summary / License
constantly	15.1.0	Symbolic constants in Python / MIT
contourpy	1.0.5	Python library for calculating contours of 2D quadrilateral grids. / BSD-3
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project t
cryptography	39.0.1	Provides cryptographic recipes and primitives to Python developers / (BS
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.87.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cytoolz	0.12.0	Cython implementation of Toolz. High performance functional utilities /
daal4py	2023.0.2	A convenient Python API to Intel (R) oneAPI Data Analytics Library / A
dal	2023.0.1	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
datashader	0.14.4	Data visualization toolchain based on aggregating into a grid / BSD-3-Cl
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages tha
dill	0.3.6	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docstring-to-markdown	0.11	On the fly conversion of Python docstrings to markdown / LGPL-2.1-or-l
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
executing	0.8.3	Get the currently executing AST node of a frame, and other information /
expat	2.4.9	Expat XML parser library in C / MIT
filelock	3.9.0	A platform independent file lock. / Unlicense
flake8	6.0.0	Your Tool For Style Guide Enforcement / MIT
flask	2.2.2	A simple framework for building complex web applications. / BSD-3-Cla
flit-core	3.6.0	Simplified packaging of Python modules / BSD-3-Clause
fontconfig	2.14.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.12.1	A Free, High-Quality, and Portable Font Engine / GPL-2-only and Licens
fsspec	2022.11.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.3	Clean single-source support for Python 3 and 2 / MIT
gensim	4.3.0	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-
greenlet	2.0.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.4	Stop plotting your data - annotate your data and let it visualize itself. / BS
huggingface_hub	0.10.1	Client library to download and publish models, datasets and other repos c
hvplot	0.8.2	A high-level plotting API for the PyData ecosystem built on HoloViews /

Name	Version	Summary / License
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.4	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.26.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
imbalanced-learn	0.10.1	Python module to balance data set using under- and over-sampling / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.7	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.19.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.10.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.7.1	Pure Python DBus interface / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-
jinja2	3.1.2	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.17.3	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	7.3.4	Jupyter protocol implementation and client libraries. / BSD-3-Clause
jupyter_console	6.6.2	Jupyter terminal console / BSD-3-Clause
jupyter_core	5.2.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.23.4	Jupyter Server / BSD-3-Clause
jupyterlab	3.5.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.19.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.4	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.4	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.38	A set of programming tools for creating and managing binary programs,

Name	Version	Summary / License
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	10.0.1	Development headers and libraries for Clang / Apache-2.0 WITH LLVM
libcurl	7.87.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.17	libdeflate is a library for fast, whole-buffer DEFLATE-based compressio
libedit	3.1.20221030	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled
libevent	2.1.12	An event notification library. / BSD-3-Clause
libffi	3.4.2	A Portable Foreign Function Interface Library / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MI
libpng	1.6.39	PNG reference library / Zlib
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / Postgre
libprotobuf	3.20.3	Protocol Buffers - Google's data interchange format. C++ Libraries and p
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.5.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.41.5	Portable uuid C library 2.32.1 as pk-version 1.41.5. / BSD-3-Clause
libwebp	1.2.4	WebP image library / BSD-3-Clause
libwebp-base	1.2.4	WebP image library / BSD-3-Clause
libxcb	1.15	This is the C-language Binding (XCB) package to the X Window System
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Der
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.39.1	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.4	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markdown	3.4.1	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.1.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.7.0	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Cla
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings.

Name	Version	Summary / License
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point con
mpi	1.0	Metapackage to select the MPI variant. Use conda's pinning mechanism
mpich	3.3.2	A high performance widely portable implementation of the MPI standard
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the myp
nbclassic	0.5.2	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.5.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.7.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.4	Library for text-based user interfaces / MIT AND X11
nest-asyncio	1.5.6	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3
ninja	1.10.2	A small build system with a focus on speed / Apache-2.0
ninja-base	1.10.2	A small build system with a focus on speed / Apache-2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0
notebook	6.5.2	Jupyter Notebook / BSD-3-Clause
notebook-shim	0.2.2	A shim layer for notebook traits and config / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-2
nss	3.74	A set of libraries designed to support cross-platform development of secu
numba	0.56.4	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Cla
numpy-base	1.23.5	Array processing for numbers, strings, records, and objects. / BSD-3-Cla
numpydoc	1.5.0	Sphinx extension to support docstrings in Numpy format / BSD-3-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1t	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	22.0	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.5.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.14.3	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.3	Param: Make your Python code clearer and more reliable by declaring Pa
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selec
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Appendable key-value storage / BSD-3-Clause
pathspec	0.10.3	Utility library for gitignore style pattern matching of file paths. / MPL-2.
patsy	0.5.3	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR

Name	Version	Summary / License
pip	22.3.1	PyPA recommended tool for installing Python packages / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dir
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
pooch	1.4.0	A friend to fetch your data files / BSD-3-Clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.36	Library for building powerful interactive command lines in Python / BSD
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / B
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.10.0	Python style guide checker / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.5.0	python package common tasks for users (e.g. copy examples, fetch data,
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD-3-C
pydocstyle	6.3.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	3.0.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.16.2	python code static checker / GPL-2.0-or-later
pylint-venv	2.3.0	pylint-venv provides a Pylint init-hook to use the same Pylint installation
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	23.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-o
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.10.9	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / M
python-lsp-server	1.7.1	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.1	Python library for the snappy compression library from Google / BSD-3-
pytoolconfig	1.2.5	Python tool configuration / LGPL-3.0-or-later
pytorch	1.12.1	PyTorch is an optimized tensor library for deep learning using GPUs and

Name	Version	Summary / License
pytz	2022.7	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.4.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qstylizer	0.2.2	Qt stylesheet generation utility for PyQt/PySide / MIT
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.2.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.4.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute JavaS
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . /
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	1.7.0	A python refactoring library / LGPL-3.0-or-later
rtree	1.0.1	R-Tree spatial index for Python GIS / MIT
scikit-image	0.19.3	Image processing in Python. / BSD-3-Clause
scikit-learn	1.2.1	A set of python modules for machine learning and data mining / BSD-3-C
scikit-learn-intelex	2023.0.2	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Sc
scipy	1.10.0	Scientific Library for Python / BSD-3-Clause
scrapy	2.8.0	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.12.2	Statistical data visualization / BSD-3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	65.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.3.2.post1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
spyder	5.4.1	The Scientific Python Development Environment / MIT
spyder-kernels	2.4.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.40.1	Implements a self-contained, zero-configuration, SQL database engine /

Name	Version	Summary / License
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative disp
statsmodels	0.13.5	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.11.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility.
tbb	2021.7.0	High level abstract threading library / Apache-2.0
tbb4py	2021.7.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apac
terminado	0.17.1	Terminals served by tornado websockets / BSD-2-Clause
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss2	1.2.1	Low-level CSS parser for Python / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and T
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains
tokenizers	0.11.4	Fast State-of-the-Art Tokenizers optimized for Research and Production /
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.12.0	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.7.1	Configuration system for Python applications / BSD-3-Clause
transformers	4.24.0	State-of-the-art Machine Learning for JAX, PyTorch and TensorFlow / A
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.4.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022g	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR B
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings /
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.14	HTTP library with thread-safe connection pooling, file post, and more. /
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.2.2	The comprehensive WSGI web application library. / BSD-3-Clause
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files / M
wheel	0.38.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	2022.11.0	N-D labeled arrays and datasets in Python. / Apache-2.0
xz	5.2.10	Data compression software with high compression ratio / LGPL-2.1-or-la
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late

Name	Version	Summary / License
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.11.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.13	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

Anaconda 2022.10 (Oct 18, 2022)

User-facing changes

- Conda has been updated to v22.9.0.
- Anaconda Navigator has been updated to v2.3.1.
- This installer uses python-3.9.
- This is the first release that provides a python-3.10 variant for *anaconda* metapackages.
- This is the last release that will provide a python-3.7 variant for *anaconda* metapackages.
- Qt support for macOS M1 (osx-arm64), enabling full use of GUI applications like Anaconda Navigator and Spyder.

Major package updates

- anaconda-client 1.9.0 -> 1.11.0
- anaconda-project 0.10.2 -> 0.11.1
- bokeh 2.4.2 -> 2.4.3
- conda-content-trust 0.1.1 -> 0.1.3
- conda-token 0.3.0 -> 0.4.0
- daal4py 2021.5.0 -> 2021.6.0
- dask 2022.2.1 -> 2022.7.0
- datashader 0.13.0 -> 0.14.1
- holoviews 1.14.8 -> 1.15.0
- jupyter_client 6.1.12 -> 7.3.5
- jupyter_console 6.4.0 -> 6.4.3
- jupyter_core 4.9.2 -> 4.11.1
- jupyter_server 1.13.5 -> 1.18.1
- jupyterlab 3.3.2 -> 3.4.4
- matplotlib 3.5.1 -> 3.5.2

- pandas 1.4.2 -> 1.4.4
- pillow 9.0.1 -> 9.2.0
- python 3.9.12 -> 3.9.13
- requests 2.27.1 -> 2.28.1
- scipy 1.7.3 -> 1.9.1
- spyder 5.1.5 -> 5.3.3
- spyder-kernels 2.1.3 -> 2.3.3

Packages

Anaconda 2022.10 for 64-bit Windows with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-navigator	2.3.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop impleme
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. /
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-late
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / B
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster tha
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT

Tab

Name	Version	Summary / License
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
certifi	2022.9.14	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and n
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maint
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
comtypes	1.1.10	pure Python COM package / MIT
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project temp
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apa
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BS
daal4py	2021.6.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / Apac
dal	2021.6.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Claus
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that ma
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	4.0.1	Your Tool For Style Guide Enforcement / MIT

Tab

Name	Version	Summary / License
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseR
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can capture p
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BS
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2022.1.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Cla
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInt
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.31.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-2-C
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cl
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol.

Tab

Name	Version	Summary / License
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variabl
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications.
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression an
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert from
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO f
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libwebp	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, def
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Cla
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GP
m2-msys2-runtime	2.5.0.17080.65c939c	Posix emulation engine for Windows / GPL
m2-patch	2.7.5	A utility to apply patch files to original sources / GPL
m2w64-libwinpthread-git	5.0.0.4634.697f757	/ MIT, BSD
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.19	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInt
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings. / BS
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Mat

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Name	Version	Summary / License
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability dist
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy ty
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepr
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Cl
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Paran
paramiko	2.8.1	SSH2 protocol library / LGPL-2.1-or-later
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
pathspec	0.9.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cl
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-

Tab

Name	Version	Summary / License
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Cl
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO f
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...)
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clau
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, for
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.5.0	PyNaCl is a Python binding to the Networking and Cryptography library, a c
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.9.2	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks fo
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Ap
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.3.3	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Cla
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pywin32	302	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) / BSD 3 C
pywinpty	2.0.2	Pseudoterminals for Windows in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only

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Name	Version	Summary / License
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.2.2	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Ap
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Clau
scikit-learn-intelex	2021.6.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Scikit-
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platform
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	4.19.13	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MI
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apa
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help boo
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docume
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized
spyder	5.2.2	The Scientific Python Development Environment / MIT
spyder-kernels	2.2.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / bles
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / M
tbb	2021.6.0	High level abstract threading library / Apache-2.0
tbb4py	2021.6.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and co
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic

Tab

Name	Version	Summary / License
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more s
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally d
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
twisted-iocpsupport	1.0.2	An extension for use in the twisted I/O Completion Ports reactor. / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BS
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MI
vc	14.2	A meta-package to impose mutual exclusivity among software built with diff
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 2019 update
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Windows (wit
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Python
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ctyp
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communicating
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.27.15	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read a
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD

Tab

Name	Version	Summary / License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPI

Anaconda 2022.10 for macOS on Apple M1 with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-navigator	2.3.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cla
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementation
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the positio
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievin
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MIT
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *memc*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
cctools	949.0.1	Native assembler, archiver, ranlib, libtool, otool et al for Darwin Mach-O files / APS
cctools_osx-arm64	949.0.1	Assembler, archiver, ranlib, libtool, otool et al for Darwin Mach-O files / APSL-2.0
certifi	2022.9.24	Python package for providing Mozilla's CA Bundle. / MPL-2.0

Table

Name	Version	Summary / License
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near-loss
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Claus
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns.
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-later
greenlet	1.1.0	Lightweight in-process concurrent programming / MIT

Table

Name	Version	Summary / License
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.12.1	HDF5 is a data model, library, and file format for storing and managing data / HDF5
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Claus
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-Cl
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD-
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2-
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Clause
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld64	530	Darwin Mach-O native linker / APSL-2.0
ld64_osx-arm64	530	Darwin Mach-O cross linker / APSL-2.0
ldid	2.1.2	pseudo-codesign Mach-O files / AGPL-3.0-only
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause

Table

Name	Version	Summary / License
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libcxx	14.0.6	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libeve
libffi	3.4.2	A Portable Foreign Function Interface Library. / MIT
libgfortran	5.0.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only V
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only V
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert from/to Un
libidn2	2.3.1	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND L
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libllvm14	14.0.6	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulati
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or z
llvm-openmp	14.0.6	The OpenMP API supports multi-platform shared-memory parallel programming in
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-2
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm

Table

Name	Version	Summary / License
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocessor
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	/ BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openblas	0.3.21	An optimized BLAS library / BSD-3-Clause
openblas-devel	0.3.21	OpenBLAS headers and libraries for developing software that used OpenBLAS. / B
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Clau
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / BSD-
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a "u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-Clau
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT

Table

Name	Version	Summary / License
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clause
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amounts of data. /
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clause
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop / BSD-3-Cla
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2.
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.1.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BS
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only

Table

Name	Version	Summary / License
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.0
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BSI
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BSI
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-2
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays / MIT
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tapi	1100.0.11	TAPI is a Text-based Application Programming Interface / NCSA
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and command
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a URL,
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develope
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause

Table

Name	Version	Summary / License
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.27.15	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and GP
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read and writ
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-o

Anaconda 2022.10 for macOS on Intel 64-bit with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-navigator	2.3.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cl
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementatio
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
applaunchservices	0.3.0	Simple package for registering an app with apple Launch Services to handle UTI a
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievi
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style guide
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MI
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT

Table

Name	Version	Summary / License
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BSD-3-C
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *mem*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
cctools	949.0.1	Native assembler, archiver, ranlib, libtool, otool et al for Darwin Mach-O files / AP
cctools_osx-64	949.0.1	Assembler, archiver, ranlib, libtool, otool et al for Darwin Mach-O files / APSL-2.0
certifi	2022.9.24	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near-los
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project templates)
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Clau
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
daal4py	2021.6.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / Apache-2.0
dal	2021.6.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0

Table

Name	Version	Summary / License
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that manipula
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	4.0.1	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
gettext	0.21.0	Internationalization package / GPL-2.0
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications written in C
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-late
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / HDF
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Clau
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-C
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryIntel
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.31.1	IPython: Productive Interactive Computing / BSD-3-Clause

Table

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-2-Clause
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-Clause
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Claus
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld64	530	Darwin Mach-O native linker / APSL-2.0
ld64_osx-64	530	Darwin Mach-O cross linker / APSL-2.0
ldid	2.1.2	pseudo-codesign Mach-O files / AGPL-3.0-only
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	12.0.0	Development headers and libraries for Clang / Apache-2.0 WITH LLVM-exception
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libcxx	14.0.6	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libev
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgfortran	5.0.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only

Table

Name	Version	Summary / License
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert from/to Un
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exceptio
libllvm12	12.0.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exceptio
libllvm14	14.0.6	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exceptio
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libpng	1.6.37	PNG reference library / zlib/libpng
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / PostgreSQL
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulat
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or
llvm-openmp	14.0.6	The OpenMP API supports multi-platform shared-memory parallel programming i
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryIntel
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings. / BSD-3-
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Math Kern
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability distributio
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpi	1.0	A high performance widely portable implementation of the MPI standard. / MPICH
mpich	3.3.2	A high performance widely portable implementation of the MPI standard. / MPICH
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typeche
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocesso
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause

Table

Name	Version	Summary / License
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-2.0
nss	3.74	A set of libraries designed to support cross-platform development of security-enabl
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Cla
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / BSD
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
pathspec	0.9.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as Perl 5
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a "u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-Clau
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats

Table

Name	Version	Summary / License
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clause
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyobjc-core	8.5	Python<->ObjC Interoperability Module / MIT
pyobjc-framework-cocoa	8.5	Wrappers for the Cocoa frameworks on Mac OS X / MIT
pyobjc-framework-coreservices	8.5	Wrappers for the "CoreServices" framework on macOS. / MIT
pyobjc-framework-fsevents	8.5	Wrappers for the framework FSEvents on macOS / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of data.
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.5.0	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clause
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop / BSD-3-Cl
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy, PyQt
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT

Table

Name	Version	Summary / License
qtconsole	5.3.2	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute JavaScript code
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2
requests-file	1.5.1	file transport adapter for Requests / Apache
ripgrep	13.0.0	ripgrep is a line-oriented search tool that recursively searches the current directory
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Clause
scikit-learn-intelex	2021.6.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Scikit-learn a
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BS
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BS
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BS
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM
spyder	5.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	2.3.3	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tapi	1000.10.8	TAPI is a Text-based Application Programming Interface / NCSA
tbb	2021.6.0	High level abstract threading library / Apache-2.0
tbb4py	2021.6.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0

Table

Name	Version	Summary / License
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and comman
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more sequen
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a URL
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develop
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSD-3-C
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files / MIT
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.27.15	Interact with Excel from Python and vice versa / BSD-3-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and G
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read and wri
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD

Table

Name	Version	Summary / License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-c

Anaconda 2022.10 for 64-bit Linux on IBM Z CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cla
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementation
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the positio
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievin
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MIT
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *memc*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
certifi	2022.9.24	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause

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Name	Version	Summary / License
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Claus
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
expat	2.4.9	Expat XML parser library in C / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications written in C
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns.
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-later
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / HDF5
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Claus
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-Cl
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause

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Name	Version	Summary / License
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.2	Data load and catalog system / BSD-2-Clause
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-Clause
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2-
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Claus
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.38	A set of programming tools for creating and managing binary programs, object files
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libeve
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libidn2	2.3.0	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND L
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.

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Name	Version	Summary / License
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulati
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.15	This is the C-language Binding (XCB) package to the X Window System protocol /
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or z
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-2
lz4	3.1.0	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.3	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocessor
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	/ BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.21	An optimized BLAS library / BSD-3-Clause

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Name	Version	Summary / License
openblas-devel	0.3.21	OpenBLAS headers and libraries for developing software that used OpenBLAS. / B
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Clau
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.12.6	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables. / GPL
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as Perl 5.
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a “u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, …) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of data. /
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0

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Name	Version	Summary / License
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2.
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.1.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BSI
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.1.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.0
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BSI
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BSI
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-2
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays / MIT
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and command
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT

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Name	Version	Summary / License
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develope
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and GP
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-o

Anaconda 2022.10 for 64-bit Linux on IBM Power CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cla
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementation
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the positi
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievin
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT

Table

Name	Version	Summary / License
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MIT
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *memc*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
certifi	2022.9.14	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near-loss
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Claus
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause

Table

Name	Version	Summary / License
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
expat	2.4.9	Expat XML parser library in C / MIT
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns.
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-later
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / HDF5
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Claus
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-Cl
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause

Table

Name	Version	Summary / License
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-Clause
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD-
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2-
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Claus
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.38	A set of programming tools for creating and managing binary programs, object files
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libeve
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND L
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulati
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause

Table

Name	Version	Summary / License
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-2
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocessor
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	/ BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openblas	0.3.21	An optimized BLAS library / BSD-3-Clause
openblas-devel	0.3.21	OpenBLAS headers and libraries for developing software that used OpenBLAS. / B
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Clau
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause

Table

Name	Version	Summary / License
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / BSD-
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables. / GPL
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as Perl 5.
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a "u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-Clau
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clause
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of data. /
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0

Table

Name	Version	Summary / License
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clause
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2.
requests-file	1.5.1	file transport adapter for Requests / Apache
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.1.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BSI
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.0
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BSI
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BSI
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-2
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays / MIT
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tbb	2021.6.0	High level abstract threading library / Apache-2.0
tbb4py	2021.6.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and command
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause

Table

Name	Version	Summary / License
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a URL,
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develope
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and GP
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read and writ
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-o

Anaconda 2022.10 for 64-bit Linux on ARMv8 CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-navigator	2.3.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cla
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementation

Table

Name	Version	Summary / License
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievin
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style guide /
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MIT
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BSD-3-C
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *memc*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
certifi	2022.9.24	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near-loss
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause

Table

Name	Version	Summary / License
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project templates),
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Claus
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that manipulat
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
expat	2.4.9	Expat XML parser library in C / MIT
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	4.0.1	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications written in C
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns.
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-later
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.1.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.12.0	HDF5 is a data model, library, and file format for storing and managing data / HDF5
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Claus

Table

Name	Version	Summary / License
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-Cl
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.31.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jeepney	0.7.1	Pure Python DBus interface / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-2-Clause
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-Clause
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD-
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2-
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Claus
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.38	A set of programming tools for creating and managing binary programs, object files

Table

Name	Version	Summary / License
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	10.0.1	Development headers and libraries for Clang / Apache-2.0 WITH LLVM-exception
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libeve
libevent	2.1.12	An event notification library. / BSD-3-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only V
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libidn2	2.3.1	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND L
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.21	An Optimized BLAS library / BSD-3-Clause
libpng	1.6.37	PNG reference library / zlib/libpng
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / PostgreSQL
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulati
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.15	This is the C-language Binding (XCB) package to the X Window System protocol /
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Derivative
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or z
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-2
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause

Table

Name	Version	Summary / License
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typechec
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocesso
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	/ BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-2.0
nss	3.74	A set of libraries designed to support cross-platform development of security-enable
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openblas	0.3.21	An optimized BLAS library / BSD-3-Clause
openblas-devel	0.3.21	OpenBLAS headers and libraries for developing software that used OpenBLAS. / B
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Clau
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / BSD-
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables. / GPL
pathspec	0.9.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as Perl 5.
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC

Table

Name	Version	Summary / License
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a "u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-Clau
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clause
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of data. /
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.5.0	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT

Table

Name	Version	Summary / License
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clause
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python. / GNU L
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy, PyQt
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.2	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute JavaScript code
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2.
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.1.1	A set of python modules for machine learning and data mining / BSD-3-Clause
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BSI
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.0
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BSI
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BSI
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-2
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM

Table

Name	Version	Summary / License
spyder	5.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	2.3.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tbb	2021.6.0	High level abstract threading library / Apache-2.0
tbb4py	2021.6.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and command
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more sequenc
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a URL,
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develope
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSD-3-Cl
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files / MIT
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /

Table

Name	Version	Summary / License
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and GP
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-o

Anaconda 2022.10 for 64-bit Linux with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.11.0	anaconda.org command line client library / BSD-3-Clause
anaconda-navigator	2.3.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.11.1	Tool for encapsulating, running, and reproducing data science projects / BSD-3-Cla
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implementation
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / MIT
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.11.7	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.1	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by relievin
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style guide /
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState. / MIT
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BSD-3-C
bitarray	2.5.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	22.6.0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than *memc*
bokeh	2.4.3	Bokeh is an interactive visualization library for modern web browsers. / BSD-3-Cla

Table

Name	Version	Summary / License
boto3	1.24.28	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.27.28	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.5	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotli-bin	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.07.19	Certificates for use with other packages. / MPL-2.0
certifi	2022.9.14	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.1	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and near-loss
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively maintained a
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.5	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	22.9.0	OS-agnostic, system-level binary package and environment manager. / BSD-3-Clau
conda-build	3.22.0	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.3	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.4.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project templates),
cryptography	37.0.1	Provides cryptographic recipes and primitives to Python developers / (BSD-3-Claus
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.84.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.32	The Cython compiler for writing C extensions for the Python language / Apache-2.0
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD-3-Cl
daal4py	2021.6.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / Apache-2.0
dal	2021.6.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.7.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.7.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.14.1	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that manipula
dill	0.3.4	Serialize all of python (almost) / BSD-3-Clause
distributed	2022.7.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.18.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Dedicatio

Table

Name	Version	Summary / License
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2.0
expat	2.4.9	Expat XML parser library in C / MIT
fftw	3.3.9	The fastest Fourier transform in the west. / GPL 2
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	4.0.1	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A simple framework for building complex web applications. / BSD-3-Clause
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2-only and LicenseRef-Free
fsspec	2022.7.1	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications written in C.
glob2	0.7	Version of the glob module that supports recursion via **, and can capture patterns.
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-or-later
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.7.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data / HDF5
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.15.0	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3-Claus
hvplot	0.8.0	A high-level plotting API for the PyData ecosystem built on HoloViews / BSD-3-Cl
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clause
imageio	2.19.3	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.4.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryIntel
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.15.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.31.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clause
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT

Table

Name	Version	Summary / License
jeepney	0.7.1	Pure Python DBus interface / MIT
jellyfish	0.9.0	a library for doing approximate and phonetic matching of strings. / BSD-2-Clause
jinja2	2.11.3	A very fast and expressive template engine. / BSD-3-Clause
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Clause
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.16.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-Clause
jupyter_client	7.3.4	jupyter_client contains the reference implementation of the Jupyter protocol. / BSD
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.11.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.18.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.4.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variables / BS
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. / BSD-
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / BSD-2-
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-Claus
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.38	A set of programming tools for creating and managing binary programs, object files
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.6.1	Multi-format archive and compression library / BSD-2-Clause
libbrotlicommon	1.0.9	Brotli compression format / MIT
libbrotlidec	1.0.9	Brotli compression format / MIT
libbrotlienc	1.0.9	Brotli compression format / MIT
libclang	10.0.1	Development headers and libraries for Clang / Apache-2.0 WITH LLVM-exception
libcurl	7.84.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and deco
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after libeve
libevent	2.1.12	An event notification library. / BSD-3-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	11.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran-ng	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libgfortran5	11.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-only
libgomp	11.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3.1
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 AND L
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exception
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libpng	1.6.37	PNG reference library / zlib/libpng
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / PostgreSQL

Table

Name	Version	Summary / License
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	11.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.4.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for manipulati
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.15	This is the C-language Binding (XCB) package to the X Window System protocol /
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Derivative
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, deflate or
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clause
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.9.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and GPL-2
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL v2+
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.6	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryIntel
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings. / BSD-3-C
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Math Kern
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability distributio
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precision. /
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computations
mpi	1.0	A high performance widely portable implementation of the MPI standard. / MPICH
mpich	3.3.2	A high performance widely portable implementation of the MPI standard. / MPICH
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clause
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres algorithm
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typechec
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePreprocessor
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.5.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.8.4	Python package for creating and manipulating complex networks / BSD-3-Clause
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1

Table

Name	Version	Summary / License
notebook	6.4.12	Jupyter Notebook / BSD-3-Clause
nspr	4.33	A platform-neutral API for system level and libc-like functions. / MPL-2.0
nss	3.74	A set of libraries designed to support cross-platform development of security-enable
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.4.0	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1q	OpenSSL is an open-source implementation of the SSL and TLS protocols / OpenS
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.4	High-performance, easy-to-use data structures and data analysis tools. / BSD-3-Clau
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.1	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parameters /
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors / BSD-
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patch	2.7.6	Native Win32 versions of common unix tools / GPL 3
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables. / GPL
pathspec	0.9.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Clause A
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as Perl 5.
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-PIL
pip	22.2.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.5.2	A small Python module for determining appropriate platform-specific dirs, e.g. a "u
plotly	5.9.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.14.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-Clause
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3-Clau
psutil	5.9.0	A cross-platform process and system utilities module for Python / BSD-3-Clause
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO formats.
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause

Table

Name	Version	Summary / License
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) / BSD
pycurl	7.45.1	A Python Interface To The cURL library / LGPL-2.1-only, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Clause
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, forums, w
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.14.5	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.34	DB API Module for ODBC / MIT-0
pyopenssl	22.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.9	Create and execute simple grammars / MIT
pyqt	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqt5-sip	12.11.0	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyqtwebengine	5.15.7	Python bindings for the Qt cross platform application toolkit / GPL-3.0-only
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for more
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of data. /
pytest	7.1.2	Simple and powerful testing with Python. / MIT
python	3.9.13	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apache
python-fastjsonschema	2.16.2	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.2.1	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.5.0	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clause
pytz	2022.1	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python. / GNU L
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	23.2.0	Python bindings for zeromq / BSD-3-Clause AND LGPL-3.0-or-later
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy, PyQt
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-main	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qt-webengine	5.15.9	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.2	Jupyter Qt Console / BSD-3-Clause
qtpy	2.2.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
qtwebkit	5.212	WebKit is one of the major engine to render webpages and execute JavaScript code
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.7.9	Alternative regular expression module, to replace re / Apache-2.0
requests	2.28.1	Requests is an elegant and simple HTTP library for Python, built with . / Apache-2.
requests-file	1.5.1	file transport adapter for Requests / Apache
ripgrep	13.0.0	ripgrep is a line-oriented search tool that recursively searches the current directory f

Table

Name	Version	Summary / License
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.6.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Clause
scikit-learn-intelex	2021.6.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Scikit-learn a
scipy	1.9.1	Scientific Library for Python / BSD-3-Clause
scrapy	2.6.2	A high-level Python Screen Scraping framework / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD-3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms. / BSI
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	63.4.1	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.6.2	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apache-2.0
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	5.0.2	Sphinx is a tool that makes it easy to create intelligent and beautiful documentation
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help books / BS
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp document / BSI
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files. / BSI
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BSD-2-C
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document / BSD-2
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized” HTM
spyder	5.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	2.3.3	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.39	Database Abstraction Library. / MIT
sqlite	3.39.3	Implements a self-contained, zero-configuration, SQL database engine / blessing
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.10	Pretty-print tabular data in Python, a library and a command-line utility. / MIT
tbb	2021.6.0	High level abstract threading library / Apache-2.0
tbb4py	2021.6.0	TBB module for Python / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2.0
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.6.0	Testpath is a collection of utilities for Python code working with files and command
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more sequenc
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. / TCL

Table

Name	Version	Summary / License
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a URL,
toml	0.10.2	Python lib for TOML. / MIT
tomli	2.0.1	A simple TOML parser / MIT
tomlkit	0.11.1	Style preserving TOML library / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally develope
tqdm	4.64.1	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.3.0	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022c	The Time Zone Database (called tz, tzdb or zoneinfo) / CC-PDDC OR BSD-3-Clau
ujson	5.4.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSD-3-Cl
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.11	ODBC on non MS Windows platforms / LGPL-2.1-or-later
urllib3	1.26.11	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
whatthepatch	1.0.2	What The Patch!? is a library for both parsing and applying patch files / MIT
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.14.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet files /
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.6	Data compression software with high compression ratio / LGPL-2.1-or-later and GP
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read and writ
zict	2.1.0	Composable Dictionary Classes / BSD-3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.5.2	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL-2.0-o

Anaconda 2022.05 (May 10, 2022)

User-facing changes

- Anaconda Navigator has been updated to 2.1.4.
- Conda has been updated to 4.12.0.
- CVE-2022-26526 for Windows has been fixed. Now installations for "All Users" will not be allowed the option to modify the system PATH environment variable during installation. Installations for "Just Me" will still be allowed the option to add Anaconda3 to their PATH environment variable. Additionally, when installing with Administrator privileges, non-admin system Users will no longer have "Write" permissions.
- JetBrains PyCharm Pro has been replaced with JetBrains DataSpell.
- This is the first release of Anaconda Distribution that supports macOS M1 (osx-arm64).
- This is the last release of Anaconda Distribution that will support Windows 32-bit (win-32).

Major package updates

- anaconda-project 0.10.1 -> 0.10.2
- bokeh 2.4.1 -> 2.4.2
- dask 2021.10.0 -> 2022.2.1
- ipython 7.29.0 -> 8.2.0
- jupyter_core 4.8.1 -> 4.9.2
- jupyter_server 1.4.1 -> 1.13.5
- jupyterlab 3.2.1 -> 3.3.2
- jupyterlab_server 2.8.2 -> 2.10.3
- matplotlib 3.4.3 -> 3.5.1
- numba 0.54.1 -> 0.55.1
- numpy 1.20.3 -> 1.21.5
- pandas 1.3.4 -> 1.4.2
- pillow 8.4.0 -> 9.0.1
- python 3.9.7 -> 3.9.12
- requests 2.26.0 -> 2.27.1
- scikit-learn 0.24.2 -> 1.0.2
- statsmodels 0.12.2 -> 0.13.2
- sympy 1.9 -> 1.10.1

Added:

- conda-verify 3.4.2
- datashader 0.13.0
- holoviews 1.14.8

Packages

Anaconda 2022.05 for 64-bit Windows with Python 3.9

Name	Version	Summary / License
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.4	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects /
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop imp
appdirs	1.4.4	A small Python module for determining appropriate platform-specific d
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) wi
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classe
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-cl
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Claus
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at Active
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faste
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio

Name	Version	Summary / License
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless a
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively r
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
comtypes	1.1.10	pure Python COM package / MIT
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / I
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Ap
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities
daal4py	2021.5.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / A
dal	2021.5.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-C
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages th
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND
executing	0.8.3	Get the currently executing AST node of a frame, and other information
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BS
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lic
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequenc
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT

Name	Version	Summary / License
glob2	0.7	Version of the glob module that supports recursion via **, and can capt
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.31.0	Python Client for Google Cloud Storage / Apache-2.0
google-crc32c	1.1.2	Python wrapper for a hardware-based implementation of the CRC32C h
google-resumable-media	1.3.1	Utilities for Google Media Downloads and Resumable Uploads / Apach
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / B
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprieta
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Cla
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprieta
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Cla
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / M
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BS
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BS
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter prot

Name	Version	Summary / License
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS va
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applicat
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / B
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcrc32c	1.1.1	CRC32C implementation with support for CPU-specific acceleration ins
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compressio
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and Mac
libpng	1.6.37	PNG reference library / zlib/libpng
libprotobuf	3.19.1	Protocol Buffers - Google's data interchange format. C++ Libraries and
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libwebp	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C.
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Cl
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.18	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Cl
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprieta
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	

Name	Version	Summary / License
multidict	5.1.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkr
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the my
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's Executel
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Cl
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Cl
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protoc
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. /
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring P
paramiko	2.8.1	SSH2 protocol library / LGPL-2.1-or-later
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS sele
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. /
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / License
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BS
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BS
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions /
protobuf	3.19.1	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC

Name	Version	Summary / License
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and Mac
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography librar
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GP
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySoc
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amoun
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause an
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. /
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pywin32	302	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) / BSI
pywinpty	2.0.2	Pseudoterminals for Windows in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5,
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.0	Jupyter Qt Console / BSD-3-Clause

Name	Version	Summary / License
qtpy	2.0.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with .
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3
scikit-learn-intelex	2021.5.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your S
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all plat
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	4.19.13	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful doc
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp doc
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScrip
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docun
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “seria
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine /
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative di
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility.
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apa
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files an
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic

Name	Version	Summary / License
textdistance	4.2.1	TextDistance – python library for comparing distance between two or m
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Cl
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Claus
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomain
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, origina
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
twisted-iocpsupport	1.0.2	An extension for use in the twisted I/O Completion Ports reactor. / MIT
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apac
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain
ujson	5.1.0	Ultra fast JSON decoder and encoder written in C with Python bindings
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more.
vc	14.2	A meta-package to impose mutual exclusivity among software built wit
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 2019 u
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Windows
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Py
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communic
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreads
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
yarl	1.6.3	Yet another URL library / Apache 2.0
zfp	0.5.5	Library for compressed numerical arrays that support high throughput r
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD

Name	Version	Summary / License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

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Name	Version	Summary / License
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.4	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects /
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop imp
appdirs	1.4.4	A small Python module for determining appropriate platform-specific d
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) wi
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classe
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-cl
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Claus
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at Active
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faste
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT

Table 44 – continued from pr

Name	Version	Summary / License
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively m
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
comtypes	1.1.10	pure Python COM package / MIT
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / B
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Ap
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-C
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages th
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND
executing	0.8.3	Get the currently executing AST node of a frame, and other information
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BS
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lic
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequenc
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT

Table 44 – continued from pr

Name	Version	Summary / License
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
glob2	0.7	Version of the glob module that supports recursion via **, and can capt
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.28.1	Python Client for Google Cloud Storage / Apache-2.0
google-resumable-media	0.5.1	Utilities for Google Media Downloads and Resumable Uploads / Apach
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / B
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprieta
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Cla
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprieta
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Cl
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / M
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BS
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BS
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter prot
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause

Table 44 – continued from pr

Name	Version	Summary / License
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS va
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applicat
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / B
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and Mac
libpng	1.6.37	PNG reference library / zlib/libpng
libprotobuf	3.14.0	Protocol Buffers - Google's data interchange format. C++ Libraries and
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libwebp	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C.
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Cl
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.18	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Cl
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprieta
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multidict	5.1.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkr
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the my
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's Executel
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause

Table 44 – continued from pr

Name	Version	Summary / License
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Cl
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Cl
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protoc
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. /
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring P
paramiko	2.8.1	SSH2 protocol library / LGPL-2.1-or-later
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS sele
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. /
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / License
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BS
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BS
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions /
protobuf	3.14.0	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and Mac
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause

Table 44 – continued from pr

Name	Version	Summary / License
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data,
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography librar
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GP
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySoc
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amoun
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause an
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. /
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pywin32	302	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) / BSI
pywinpty	2.0.2	Pseudoterminals for Windows in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5,
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.0.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with .
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT

Table 44 – continued from pr

Name	Version	Summary / License
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all plat
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	4.19.13	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful doc
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp doc
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScrip
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docun
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “seria
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine /
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative di
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apa
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files an
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or m
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Cl
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Claus
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomain
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause

Table 44 – continued from pr

Name	Version	Summary / License
tornado	6.1	A Python web framework and asynchronous networking library, origina
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
twisted-iocpsupport	1.0.2	An extension for use in the twisted I/O Completion Ports reactor. / MIT
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apac
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain
ujson	5.1.0	Ultra fast JSON decoder and encoder written in C with Python bindings
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more.
vc	14.2	A meta-package to impose mutual exclusivity among software built wit
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 2019 u
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Windows
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Py
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communic
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreads
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
yarl	1.6.3	Yet another URL library / Apache 2.0
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND

Anaconda 2022.05 for macOS on Apple M1 with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.2.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implemer
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.9.0	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.5.0	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.7	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.4.26	Certificates for use with other packages. / MPL-2.0
certifi	2022.5.18.1	Python package for providing Mozilla's CA Bundle. / MPL-2.0
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and ne
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	3.0.0	Collection of perceptually uniform colormaps / CC-BY-4.0

Name	Version	Summary / License
conda	4.13.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.9	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / (BSD-3
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
dask	2022.5.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.5.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2022.5.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseR
fsspec	2022.3.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-o
greenlet	1.1.0	Lightweight in-process concurrent programming / MIT
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.12.1	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0

Name	Version	Summary / License
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.3.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter_client	7.2.2	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.10.0	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications.
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
kiwisolver	1.4.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libcxx	12.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libffi	3.4.2	A Portable Foreign Function Interface Library. / MIT
libgfortran	5.0.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-
libgfortran5	11.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert from
libidn2	2.3.1	Library for internationalized domain names (IDNA2008) support / LGPLv2 A
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exc
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.20	An Optimized BLAS library / BSD-3-clause

Name	Version	Summary / License
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.14	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.35	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defla
llvm-openmp	12.0.0	The OpenMP API supports multi-platform shared-memory parallel programm
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clau
locket	1.0.0	File-based locks for Python for Linux and Windows / BSD-2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4	3.1.3	LZ4 Bindings for Python / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	Safely add untrusted strings to HTML/XML markup. / BSD-3-Clause
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.3	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.11	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD-3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openblas	0.3.20	An optimized BLAS library / BSD-3-clause

Name	Version	Summary / License
openblas-devel	0.3.20	OpenBLAS headers and libraries for developing software that used OpenBLA
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1o	OpenSSL is an open-source implementation of the SSL and TLS protocols / C
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Param
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors /
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.4.0	A small Python module for determining appropriate platform-specific dirs, e.g
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Claus
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.12.2	python code static checker / GPL-2.0-or-later
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for
pytables	3.7.0	Brings together Python, HDF5 and NumPy to easily handle large amounts of

Name	Version	Summary / License
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clau
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop / BSD
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.5.1	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.2.1	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized”
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.3	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility. / MI

Name	Version	Summary / License
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.12	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.13.3	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet f
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.6	Interact with Excel from Python and vice versa / BSD-3-clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read ar
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.8.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

Anaconda 2022.05 for macOS on Intel 64-bit with Python 3.9

Name	Version	Summary / License
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.4	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implemer
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to handle U
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style g
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BS
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC

Name	Version	Summary / License
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and ne
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project temp
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apache-
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
daal4py	2021.5.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / Apach
dal	2021.5.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that ma
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MI
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseF
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequence / Ap
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT

Name	Version	Summary / License
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-c
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.31.0	Python Client for Google Cloud Storage / Apache-2.0
google-crc32c	1.1.2	Python wrapper for a hardware-based implementation of the CRC32C hashing
google-resumable-media	1.3.1	Utilities for Google Media Downloads and Resumable Uploads / Apache-2.0
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInte
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-C

Name	Version	Summary / License
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications.
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcrc32c	1.1.1	CRC32C implementation with support for CPU-specific acceleration instructi
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libcxx	12.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgfortran	3.0.1	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert from/
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 /
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exc
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libpng	1.6.37	PNG reference library / zlib/libpng
libprotobuf	3.19.1	Protocol Buffers - Google's data interchange format. C++ Libraries and proto
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defla
llvm-openmp	12.0.0	The OpenMP API supports multi-platform shared-memory parallel programm
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clau
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clause

Name	Version	Summary / License
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInte
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings. / BS
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Math
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability distr
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpi	1.0	A high performance widely portable implementation of the MPI standard. / M
mpich	3.3.2	A high performance widely portable implementation of the MPI standard. / M
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multidict	5.2.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typ
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protocols / C
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Param
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla

Name	Version	Summary / License
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3
protobuf	3.19.1	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Claus
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2.0
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT

Name	Version	Summary / License
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clau
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop / BSD
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy,
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.0.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
requests-file	1.5.1	file transport adapter for Requests / Apache
ripgrep	12.1.1	
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scikit-learn-intelex	2021.5.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Scikit-l
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	4.19.13	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized”
spyder	5.1.5	The Scientific Python Development Environment / MIT

Name	Version	Summary / License
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility. / MI
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more se
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apache-2.0
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
ujson	5.1.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSI
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause

Name	Version	Summary / License
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
yarl	1.6.3	Yet another URL library / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read ar
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

Anaconda 2022.05 for 64-bit Linux on IBM Z CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
anyio	2.0.2	High level compatibility layer for multiple asynchronous event loop implemer
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.9.0	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause

Table 47 – continued from previous

Name	Version	Summary / License
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apache-
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MI
expat	2.4.4	Expat XML parser library in C / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-(
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseR
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications writte
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-(

Table 47 – continued from previous

Name	Version	Summary / License
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.2	Data load and catalog system / BSD-2-Clause
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-C
jupyter_client	7.2.2	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. /
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.33.1	A set of programming tools for creating and managing binary programs, obje
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libffi	3.3	A Portable Foreign Function Interface Library. / MIT

Table 47 – continued from previous

Name	Version	Summary / License
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3
libidn2	2.3.0	Library for internationalized domain names (IDNA2008) support / LGPLv2 A
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.18	An Optimized BLAS library / BSD-3-clause
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System prot
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defla
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.3	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clause
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT

Table 47 – continued from previous

Name	Version	Summary / License
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.18	An optimized BLAS library / BSD-3-clause
openblas-devel	0.3.18	OpenBLAS headers and libraries for developing software that used OpenBLA
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protocols / C
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.12.7	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Parame
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables.
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.4.0	A small Python module for determining appropriate platform-specific dirs, e.g
plotly	4.14.3	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pylint	2.12.2	python code static checker / GPL-2.0-or-later
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for

Table 47 – continued from previous

Name	Version	Summary / License
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
retrying	1.3.3	Simplify the task of adding retry behavior to just about anything. / Apache 2.0
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.5.1	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT
sniffio	1.1.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized”
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.7	Pretty-print tabular data in Python, a library and a command-line utility. / MI
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tifffile	2021.3.17	Read and write image data from and to TIFF files. / BSD-3-Clause

Table 47 – continued from previous

Name	Version	Summary / License
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.13.3	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet f
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

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Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
astroid	2.9.0	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re

Name	Version	Summary / License
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and ne
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apache-
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause

Name	Version	Summary / License
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MIT
expat	2.4.4	Expat XML parser library in C / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseR
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequence / Ap
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.31.0	Python Client for Google Cloud Storage / Apache-2.0
google-crc32c	1.1.2	Python wrapper for a hardware-based implementation of the CRC32C hashing
google-resumable-media	1.3.1	Utilities for Google Media Downloads and Resumable Uploads / Apache-2.0
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause

Name	Version	Summary / License
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-C
jupyter_client	7.2.2	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.3	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs, objec
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcrc32c	1.1.1	CRC32C implementation with support for CPU-specific acceleration instructi
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 A
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exc
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.18	An Optimized BLAS library / BSD-3-clause
libpng	1.6.37	PNG reference library / zlib/libpng
libprotobuf	3.19.1	Protocol Buffers - Google's data interchange format. C++ Libraries and proto
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND

Name	Version	Summary / License
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defla
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clau
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clause
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.7.0	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multidict	5.2.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
nltk	3.7	Natural Language Toolkit / Apache-2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openblas	0.3.18	An optimized BLAS library / BSD-3-clause
openblas-devel	0.3.18	OpenBLAS headers and libraries for developing software that used OpenBLA
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause

Name	Version	Summary / License
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Param
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables.
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
platformdirs	2.4.0	A small Python module for determining appropriate platform-specific dirs, e.g
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3
protobuf	3.19.1	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.8.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Claus
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.4.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.12.2	python code static checker / GPL-2.0-or-later
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0

Name	Version	Summary / License
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clau
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
requests-file	1.5.1	file transport adapter for Requests / Apache
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized”
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility. / MI
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause

Name	Version	Summary / License
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.13.3	Module for decorators, wrappers and monkey patching / BSD-2-Clause
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet f
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yarl	1.6.3	Yet another URL library / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read ar
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

Anaconda 2022.05 for 64-bit Linux on ARMv8 CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
adwaita-icon-theme	40.1.1	The default icon theme used by the GNOME desktop / LGPL-3.0-or-later OR
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.4	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implemer
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
at-spi2-atk	2.34.2	bridge for AT-SPI and ATK accessibility technologies / LGPL-2.1-or-later
at-spi2-core	2.36.0	D-Bus-based implementation of AT-SPI accessibility framework / LGPL-2.1-
atk-1.0	2.36.0	Accessibility Toolkit. / LGPL-2.0-or-later
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style g
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BS
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT

Name	Version	Summary / License
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. / LGF
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and ne
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project temp
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apache-
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that ma
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
epoxy	1.5.4	A library for handling OpenGL function pointer management for you. / MIT
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MI
expat	2.4.4	Expat XML parser library in C / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT

Name	Version	Summary / License
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseF
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGPL-2.
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequence / Ap
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
gdk-pixbuf	2.38.2	GdkPixbuf is a library for image loading and manipulation. / LGPL-2.1-or-lat
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
gettext	0.21.0	Internationalization package / GPL-2.0
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications writte
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-o
gobject-introspection	1.68.0	Middleware for binding GObject-based code to other languages. / LGPL-2.0-
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.31.0	Python Client for Google Cloud Storage / Apache-2.0
google-crc32c	1.1.2	Python wrapper for a hardware-based implementation of the CRC32C hashing
google-resumable-media	1.3.1	Utilities for Google Media Downloads and Resumable Uploads / Apache-2.0
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known language
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
gtk3	3.24.21	Version 3 of the Gtk+ graphical toolkit / LGPL-2.0-or-later
h5py	3.1.0	Read and write HDF5 files from Python / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.12.0	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
hicolor-icon-theme	0.17	Fallback theme for FreeDesktop.org icon themes / GPL-2.0-or-later
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jeepney	0.7.1	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-C
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications. /
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.36.1	A set of programming tools for creating and managing binary programs, objec
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcrc32c	1.1.1	CRC32C implementation with support for CPU-specific acceleration instructi
libcups	2.2.12	CUPS is the standards-based, open source printing system / LGPL-2.0-or-late
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libevent	2.1.10	An event notification library. / BSD-3-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	10.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.
libgfortran-ng	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libgfortran5	10.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL-3.0-
libgomp	10.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3
libidn2	2.3.1	Library for internationalized domain names (IDNA2008) support / LGPLv2 A
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exc

Name	Version	Summary / License
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libopenblas	0.3.18	An Optimized BLAS library / BSD-3-clause
libpng	1.6.37	PNG reference library / zlib/libpng
libpq	12.9	The postgres runtime libraries and utilities (not the server itself) / PostgreSQL
libprotobuf	3.19.1	Protocol Buffers - Google's data interchange format. C++ Libraries and proto
librsvg	2.50.7	librsvg is a library to render SVG files using cairo. / LGPL-2.1-or-later
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	10.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System prot
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Derivati
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defl
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clau
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clause
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multidict	5.2.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typ
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
ninja	1.10.2	A small build system with a focus on speed / Apache 2.0
nltk	3.7	Natural Language Toolkit / Apache-2.0

Name	Version	Summary / License
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.18	An optimized BLAS library / BSD-3-clause
openblas-devel	0.3.18	OpenBLAS headers and libraries for developing software that used OpenBLA
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protocols / C
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Param
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors /
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables.
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3
protobuf	3.19.1	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.7.0	Python style guide checker / MIT

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.8	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Claus
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.7.4	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.15.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2.0
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clau
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python. / G
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy,
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.0.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
requests-file	1.5.1	file transport adapter for Requests / Apache
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT

Name	Version	Summary / License
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scipy	1.7.1	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3-Cla
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	6.5.1	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serialized”
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility. / MI
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more se
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and Tk. / T
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT

Name	Version	Summary / License
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apache-2.0
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
ujson	5.1.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSI
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.13.3	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet f
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
yarl	1.6.3	Yet another URL library / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

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Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
aiohttp	3.8.1	Async http client/server framework (asyncio) / Apache-2.0
aiosignal	1.2.0	aiosignal: a list of registered asynchronous callbacks / Apache-2.0
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.4	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.2	Tool for encapsulating, running, and reproducing data science projects / BSD-
anyio	3.5.0	High level compatibility layer for multiple asynchronous event loop implemer
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dirs. / M
argon2-cffi	21.3.0	The secure Argon2 password hashing algorithm. / MIT
argon2-cffi-bindings	21.2.0	Low-level Python CFFI Bindings for Argon2 / MIT
arrow	1.2.2	Better dates & times for Python / Apache-2.0
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-later
astropy	5.0.4	Community-developed Python Library for Astronomy / BSD-3-Clause
asttokens	2.0.5	The asttokens module annotates Python abstract syntax trees (ASTs) with the
async-timeout	4.0.1	Timeout context manager for asyncio programs / Apache-2.0
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.4.0	attrs is the Python package that will bring back the joy of writing classes by re
automat	20.2.0	self-service finite-state machines for the programmer on the go / MIT
autopep8	1.6.0	A tool that automatically formats Python code to conform to the PEP 8 style g
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.1	Namespace for backported Python features. / MIT
backports.functools_lru_cache	1.6.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveState.
backports.tempfile	1.0	Backports of new features in Python's tempfile module / PSF 2
backports.weakref	1.0.post1	Backport of new features in Python's weakref module / Python-2.0
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apache-2.0
beautifulsoup4	4.11.1	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text. / BS
bitarray	2.4.1	efficient arrays of booleans – C extension / PSF-2.0
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster than
bokeh	2.4.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto3	1.21.32	Amazon Web Services SDK for Python / Apache-2.0
botocore	1.24.32	Low-level, data-driven core of boto 3. / Apache-2.0
bottleneck	1.3.4	Fast NumPy array functions written in Cython. / BSD-2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.18.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2022.3.29	Certificates for use with other packages. / MPL-2.0
cachetools	4.2.2	Extensible memoizing collections and decorators / MIT
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.15.0	Foreign Function Interface for Python calling C code. / MIT

Name	Version	Summary / License
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless and ne
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively mainta
click	8.0.4	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
colorcet	2.0.6	Collection of perceptually uniform colormaps / CC-BY-4.0
conda	4.12.0	OS-agnostic, system-level binary package and environment manager. / BSD-3
conda-build	3.21.8	tools for building conda packages / BSD-3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
cookiecutter	1.7.3	A command-line utility that creates projects from cookiecutters (project temp
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apache-
cssselect	1.1.0	CSS Selectors for Python / BSD 3-Clause
curl	7.82.0	tool and library for transferring data with URL syntax / curl
cycler	0.11.0	Composable style cycles. / BSD-3-Clause
cython	0.29.28	The Cython compiler for writing C extensions for the Python language / Apac
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities / BSD
daal4py	2021.5.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / Apach
dal	2021.5.1	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2022.2.1	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2022.2.1	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
datashader	0.13.0	Data visualization toolchain based on aggregating into a grid / BSD-3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.5.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.1	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that ma
distributed	2022.2.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / LicenseRef-Public-Domain-Ded
entrypoints	0.4	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND PSF-2
executing	0.8.3	Get the currently executing AST node of a frame, and other information / MI
expat	2.4.4	Expat XML parser library in C / MIT
filelock	3.6.0	A platform independent file lock. / Unlicense
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3-
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.11.0	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and LicenseR
frozenlist	1.2.0	A list-like structure which implements collections.abc.MutableSequence / Ap
fsspec	2022.2.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT

Name	Version	Summary / License
gensim	4.1.2	Topic Modelling for Humans / LGPL-2.1-only
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications writte
glob2	0.7	Version of the glob module that supports recursion via **, and can capture pa
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-later
gmpy2	2.1.2	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL-3.0-o
google-api-core	1.25.1	Core Library for Google Client Libraries / Apache-2.0
google-auth	1.33.0	Google authentication library for Python / Apache-2.0
google-cloud-core	1.7.1	API Client library for Google Cloud: Core Helpers / Apache-2.0
google-cloud-storage	1.31.0	Python Client for Google Cloud Storage / Apache-2.0
google-crc32c	1.1.2	Python wrapper for a hardware-based implementation of the CRC32C hashing
google-resumable-media	1.3.1	Utilities for Google Media Downloads and Resumable Uploads / Apache-2.0
googleapis-common-protos	1.53.0	Common protobufs used in Google APIs / Apache-2.0
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
grpcio	1.42.0	HTTP/2-based RPC framework / Apache-2.0
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.6.0	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing data /
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
holoviews	1.14.8	Stop plotting your data - annotate your data and let it visualize itself. / BSD-3
hvplot	0.7.3	A high-level plotting API for the PyData ecosystem built on HoloViews / BSI
hyperlink	21.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.3	Internationalized Domain Names in Applications (IDNA). / BSD-3-Clause
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-Clau
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.3.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
importlib_metadata	4.11.3	A library to access the metadata for a Python package. / Apache-2.0
incremental	21.3.0	Incremental is a small library that versions your Python projects. / MIT
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intake	0.6.5	Data load and catalog system / BSD-2-Clause
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInte
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.9.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	8.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itemadapter	0.3.0	Common interface for different data containers / BSD-3-Clause
itemloaders	1.0.4	Collect data from HTML and XML sources / BSD-3-Clause
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-Clau
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.18.1	An autocompletion tool for Python that can be used for text editors. / MIT
jeepney	0.7.1	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD-3-C
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
jmespath	0.10.0	Query language for JSON / MIT

Name	Version	Summary / License
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3-Cla
jpeg	9e	read/write jpeg COM, EXIF, IPTC medata / IJG
jq	1.6	A command-line JSON processor. / MIT
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	4.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-C
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protocol.
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.9.2	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.13.5	Jupyter Server / BSD-3-Clause
jupyterlab	3.3.2	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS variable
jupyterlab_server	2.10.3	A set of server components for JupyterLab and JupyterLab like applications.
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources. / B
keyring	23.4.0	Store and access your passwords safely / MIT
kiwisolver	1.3.2	An efficient C++ implementation of the Cassowary constraint solver / BSD-3-
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.35.1	A set of programming tools for creating and managing binary programs, obje
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcrc32c	1.1.1	CRC32C implementation with support for CPU-specific acceleration instructi
libcurl	7.82.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compression and
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled after
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exception-3.
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exception-3.
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-exception-3
libidn2	2.3.2	Library for internationalized domain names (IDNA2008) support / LGPLv2 A
liblief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM-exc
libnghttp2	1.46.0	This is an implementation of Hypertext Transfer Protocol version 2. / MIT
libpng	1.6.37	PNG reference library / zlib/libpng
libprotobuf	3.19.1	Protocol Buffers - Google's data interchange format. C++ Libraries and proto
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.10.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3.1
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libunistring	0.9.10	This library provides functions for manipulating Unicode strings and for mani
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libwebp	1.2.2	WebP image library / BSD-3-Clause
libwebp-base	1.2.2	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System prot

Name	Version	Summary / License
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow, defl
llvmlite	0.38.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-Clau
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause and
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GPL
markdown	3.3.4	Python implementation of Markdown. / BSD-3-Clause
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clause
matplotlib	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.5.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	A sane Markdown parser with useful plugins and renderers. / BSD-3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-ProprietaryInte
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings. / BS
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Math
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability distr
mock	4.0.3	A library for testing in Python / BSD-2-Clause
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high precis
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point computa
mpi	1.0	A high performance widely portable implementation of the MPI standard. / M
mpich	3.3.2	A high performance widely portable implementation of the MPI standard. / M
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Claus
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multidict	5.2.0	multidict implementation / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres alg
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy typ
nbclassic	0.3.5	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.13	A client library for executing notebooks. Formally nbconvert's ExecutePrepro
nbconvert	6.4.4	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.3.0	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.5	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.7.1	Python package for creating and manipulating complex networks / BSD-3-Cla
nltk	3.7	Natural Language Toolkit / Apache-2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.8	Jupyter Notebook / BSD-3-Clause
numba	0.55.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.8.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.21.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	1.2	Numpy's Sphinx extensions / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
oniguruma	6.9.7.1	A regular expression library. / BSD-2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1n	OpenSSL is an open-source implementation of the SSL and TLS protocols /

Name	Version	Summary / License
packaging	21.3	Core utilities for Python packages / Apache-2.0 or BSD-2-Clause
pandas	1.4.2	High-performance, easy-to-use data structures and data analysis tools. / BSD-
pandocfilters	1.5.0	A python module for writing pandoc filters / BSD-3-Clause
panel	0.13.0	A high-level app and dashboarding solution for Python / BSD-3-Clause
param	1.12.0	Param: Make your Python code clearer and more reliable by declaring Param
parsel	1.6.0	library to extract data from HTML and XML using XPath and CSS selectors
parso	0.8.3	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executables.
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2-Cla
pcre	8.45	Regular expression pattern matching using the same syntax and semantics as
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	9.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseRef-P
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.8.2	Query metadatdata from sdists / bdists / installed packages. / MIT
plotly	5.6.0	An interactive JavaScript-based visualization library for Python / MIT
pluggy	1.0.0	Plugin registration and hook calling for Python / MIT
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.13.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD-3-C
protego	0.1.16	A pure-Python robots.txt parser with support for modern conventions / BSD 3
protobuf	3.19.1	Protocol Buffers - Google's data interchange format. / BSD-3-Clause
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3-Cla
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
pure_eval	0.2.2	Safely evaluate AST nodes without side effects / MIT
py	1.11.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.11.5	A cross platform library to parse, modify and abstract ELF, PE and MachO fo
pyasn1	0.4.8	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.8	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.21	Complete C99 parser in pure Python / BSD-3-clause
pyct	0.4.6	python package common tasks for users (e.g. copy examples, fetch data, ...) /
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydispatcher	2.0.5	Multi-producer-multi-consumer signal dispatching mechanism / BSD 3-Claus
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.11.2	Pygments is a generic syntax highlighter suitable for use in code hosting, foru
pyhamcrest	2.0.2	Hamcrest framework for matcher objects / BSD 3-Clause
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.32	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache-2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2.0

Name	Version	Summary / License
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySocks for
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amounts of
pytest	7.1.1	Simple and powerful testing with Python. / MIT
python	3.9.12	General purpose programming language / PSF-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and Apa
python-fastjsonschema	2.15.1	Fastest Python implementation of JSON schema / BSD-3-Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / MIT
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python-snappy	0.6.0	Python library for the snappy compression library from Google / BSD-3-Clau
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pyviz_comms	2.0.2	Bidirectional communication for PyViz / BSD-3-Clause
pywavelets	1.3.0	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python. / G
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.3.0	Python bindings for zeromq / BSD-3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, QtPy,
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.3.0	Jupyter Qt Console / BSD-3-Clause
qtpy	2.0.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
queuelib	1.5.0	Collection of persistent (disk-based) queues / BSD
readline	8.1.2	library for editing command lines as they are typed in / GPL-3.0-only
regex	2022.3.15	Alternative regular expression module, to replace re / Apache-2.0
requests	2.27.1	Requests is an elegant and simple HTTP library for Python, built with . / Apa
requests-file	1.5.1	file transport adapter for Requests / Apache
ripgrep	12.1.1	
rope	0.22.0	A python refactoring library / LGPL-3.0-or-later
rsa	4.7.2	Pure-Python RSA implementation / Apache-2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
s3transfer	0.5.0	An Amazon S3 Transfer Manager / Apache-2.0
scikit-image	0.19.2	Image processing in Python. / BSD-3-Clause
scikit-learn	1.0.2	A set of python modules for machine learning and data mining / BSD-3-Claus
scikit-learn-intelex	2021.5.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Scikit-l
scipy	1.7.3	Scientific Library for Python / BSD 3-Clause
scrapy	2.6.1	A high-level Python Screen Scraping framework / BSD-3-Clause-Clear
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3-Cla
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platforms
service_identity	18.1.0	Service identity verification for pyOpenSSL. / MIT
setuptools	61.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
sip	4.19.13	A Python bindings generator for C/C++ libraries / GPL-3.0-only
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
smart_open	5.1.0	Python library for efficient streaming of large files / MIT
snappy	1.1.9	A fast compressor/decompressor / BSD-3-clause AND CC-BY-3.0 AND MIT

Name	Version	Summary / License
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.2.0	Snowball stemming library collection for Python / BSD-3-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Apac
soupsieve	2.3.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful documen
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help book
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp documen
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help files.
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript / BS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp document /
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serialized"
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.32	Database Abstraction Library. / MIT
sqlite	3.38.2	Implements a self-contained, zero-configuration, SQL database engine / bless
stack_data	0.2.0	Extract data from python stack frames and tracebacks for informative displays
statsmodels	0.13.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.10.1	Python library for symbolic mathematics / BSD-3-Clause AND MIT
tabulate	0.8.9	Pretty-print tabular data in Python, a library and a command-line utility. / MI
tbb	2021.5.0	High level abstract threading library / Apache-2.0
tbb4py	2021.5.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
tenacity	8.0.1	Retry a flaky function whenever an exception occurs until it works / Apache-2
terminado	0.13.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and com
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or more se
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clause
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and Tk. /
tldextract	3.2.0	Accurately separate the TLD from the registered domain andsubdomains of a
toml	0.10.2	Python lib for TOML. / MIT
tomli	1.2.2	A simple TOML parser / MIT
toolz	0.11.2	List processing tools and functional utilities / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originally de
tqdm	4.64.0	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.1	Configuration system for Python applications / BSD-3-Clause
twisted	22.2.0	An asynchronous networking framework written in Python / MIT
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apache-2.0
typing-extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
typing_extensions	4.1.1	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2022a	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain AND
ujson	5.1.0	Ultra fast JSON decoder and encoder written in C with Python bindings / BSI
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.9	HTTP library with thread-safe connection pooling, file post, and more. / MIT
w3lib	1.21.0	Library of web-related functions / BSD

Name	Version	Summary / License
watchdog	2.1.6	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
websocket-client	0.58.0	WebSocket client for python. hybi13 is supported. / BSD-3-Clause
werkzeug	2.0.3	The comprehensive WSGI web application library. / BSD-3-Clause
wget	1.21.3	utility for non-interactive download of files from the Web / GPL-3.0-or-later
wheel	0.37.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.2	Interactive Widgets for Jupyter / BSD-3-Clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD-2-Clause
wurlitzer	3.0.2	Capture C-level stdout/stderr in Python / MIT
xarray	0.20.1	N-D labeled arrays and datasets in Python. / Apache-2.0
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsheet f
xlsxwriter	3.0.3	A Python module for creating Excel XLSX files / BSD-2-Clause
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and GPL
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
yarl	1.6.3	Yet another URL library / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-later
zfp	0.5.5	Library for compressed numerical arrays that support high throughput read ar
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.7.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.12	Massively spiffy yet delicately unobtrusive compression library / Zlib
zope	1.0	web application server / BSD
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD-3-Clause AND GPL

Anaconda 2021.11 (Nov 17, 2021)

User-facing changes

- Anaconda Navigator has been updated to 2.1.1
- Conda has been updated to 4.10.3
- The installer and base environment now use Python 3.9. Meta-packages for Python 3.7, 3.8, and 3.9 are also available.
- Updated EULA includes disclaimers for the Arm Performance Libraries.
- The installer for linux-64 will now error out if a glibc version older than 2.17 is found.
- Improved the macOS pkg installer installation already detected error message.

Major package updates

- anaconda-client 1.7.2 -> 1.9.0
- anaconda-project 0.9.1 -> 0.10.1
- bokeh 2.3.2 -> 2.4.1
- dask 2021.4.0 -> 2021.10.0
- ipython 7.22.0 -> 7.29.0
- jupyter_core 4.7.1 -> 4.8.1
- jupyterlab 3.0.14 -> 3.2.1
- jupyterlab_server 2.4.0 -> 2.8.2
- matplotlib 3.3.4 -> 3.4.3
- mkl 2021.2.0 -> 2021.4.0
- numba 0.53.1 -> 0.54.1
- numpy 1.20.1 -> 1.20.3
- pandas 1.2.4 -> 1.3.4
- pillow 8.2.0 -> 8.4.0
- python 3.9.4 -> 3.9.7
- requests 2.25.1 -> 2.26.0
- seaborn 0.11.1 -> 0.11.2
- spyder 4.2.5 -> 5.1.5
- spyder-kernels 1.10.2 -> 2.1.3
- sympy 1.8 -> 1.9

Added:

- conda-content-trust 0.1.1
- conda-token 0.3.0

Packages

Anaconda 2021.11 for 64-bit Windows with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT

Name	Version	Summary / License
arrow	0.13.1	Better dates & times for Python / Apache-2.0
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.7	A tool that automatically formats Python code to conform to the PE
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or
bitarray	2.3.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossl
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and activ
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.10	pure Python COM package / MIT
conda	4.10.3	OS-agnostic, system-level binary package and environment manage
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cookiecutter	1.7.2	A command-line utility that creates projects from cookiecutters (pr
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers

Name	Version	Summary / License
curl	7.78.0	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
daal4py	2021.3.0	A convenient Python API to Intel (R) oneAPI Data Analytics Libra
dal	2021.3.0	Intel® oneDAL runtime libraries / Intel Simplified Software Licens
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MI
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedict
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT A
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / M
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	2021.10.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.2.1	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BS
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT

Name	Version	Summary / License
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible comput
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	23.1.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.78.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compr
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libwebp	1.2.0	WebP image library / Google
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but
llvmlite	0.37.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based

Name	Version	Summary / License
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.18	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Mu
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / I
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numba	0.54.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis too
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic

Name	Version	Summary / License
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.31	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.4	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Claus
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protoco
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / M
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	228	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.2.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-o

Name	Version	Summary / License
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.1.1	Jupyter Qt Console / BSD-3-Clause
qtpy	1.10.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.19.0	A python refactoring library / LGPL 3.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BS
scikit-learn-intelex	2021.3.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up yo
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Python binding of the cross-platform builder toolkit for Qt. / Comm
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with file
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tifffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause

Name	Version	Summary / License
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-C
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Dom
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	2.1.3	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
whichcraft	0.6.1	This package provides cross-platform cross-python shutil.which fun
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zfp	0.5.5	Library for compressed numerical arrays that support high throughp
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for 32-bit Windows with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
arrow	0.13.1	Better dates & times for Python / Apache-2.0
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.7	A tool that automatically formats Python code to conform to the PE
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or
bitarray	2.3.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and activ
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.10	pure Python COM package / MIT
conda	4.10.3	OS-agnostic, system-level binary package and environment manage
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause

Table 52 – continued from

Name	Version	Summary / License
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cookiecutter	1.7.2	A command-line utility that creates projects from cookiecutters (pr
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers
curl	7.78.0	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MI
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT A
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / M
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	2021.10.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.2.1	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause

Table 52 – continued from

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible comput
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	23.1.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.78.0	tool and library for transferring data with URL syntax / curl
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libwebp	1.2.0	WebP image library / Google
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.37.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause

Table 52 – continued from

Name	Version	Summary / License
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.18	cross platform install of menu items / BSD-3-Clause
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Mu
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / B
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numba	0.54.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis too
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT

Table 52 – continued from

Name	Version	Summary / License
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.31	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.4	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Claus
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protoco
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / M
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	228	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.2.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-o
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.1.1	Jupyter Qt Console / BSD-3-Clause
qtpy	1.10.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Table 52 – continued from

Name	Version	Summary / License
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.19.0	A python refactoring library / LGPL 3.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BS
scipy	1.6.2	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Python binding of the cross-platform builder toolkit for Qt. / Comm
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with file
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-C
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT

Table 52 – continued from

Name	Version	Summary / License
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Dom
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode string
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	2.1.3	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character code
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
whichcraft	0.6.1	This package provides cross-platform cross-python shutil.which fun
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for macOS on Intel 64-bit with Python 3.9

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir

Name	Version	Summary / License
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
arrow	0.13.1	Better dates & times for Python / Apache-2.0
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.7	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text.
bitarray	2.3.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively ma
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause

Name	Version	Summary / License
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cookiecutter	1.7.2	A command-line utility that creates projects from cookiecutters (project t
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.78.0	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
daal4py	2021.3.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / A
dal	2021.3.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	2021.8.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.2.1	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0

Name	Version	Summary / License
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible computing, ba
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
keyring	23.1.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.78.0	tool and library for transferring data with URL syntax / curl
libcxx	12.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgfortran	3.0.1	Fortran compiler and libraries from the GNU Compiler Collection / GPL
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libnghttp2	1.41.0	This is an implementation of Hypertext Transfer Protocol version 2. / MI
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.40.0	Cross-platform asynchronous I/O / MIT

Name	Version	Summary / License
libwebp	1.2.0	WebP image library / Google
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvm-openmp	12.0.0	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.37.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpi	1.0	A high performance widely portable implementation of the MPI standard
mpich	3.3.2	A high performance widely portable implementation of the MPI standard
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the myp
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numba	0.54.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT

Name	Version	Summary / License
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.(
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.31	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.4	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / M

Name	Version	Summary / License
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop /
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.2.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.1.1	Jupyter Qt Console / BSD-3-Clause
qtpy	1.10.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.19.0	A python refactoring library / LGPL 3.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BSD-3-C
scikit-learn-intelex	2021.3.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Sci
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Python binding of the cross-platform builder toolkit for Qt. / Commercial
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help f
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database engine / P

Name	Version	Summary / License
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain A
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	2.1.3	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
whichcraft	0.6.1	This package provides cross-platform cross-python shutil.which functiona
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.1	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.24.9	Interact with Excel from Python and vice versa / BSD-3-clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License

Name	Version	Summary / License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for 64-bit Linux on IBM Z CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.0.2	High level compatibility layer for multiple asynchronous event loop imple
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-l
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively ma
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause

Table 54 – continued from previou

Name	Version	Summary / License
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
expat	2.4.1	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	2021.8.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0

Table 54 – continued from previou

Name	Version	Summary / License
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	7.0.1	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible computing, ba
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.33.1	A set of programming tools for creating and managing binary programs,
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3

Table 54 – continued from previou

Name	Version	Summary / License
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.3	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1

Table 54 – continued from previou

Name	Version	Summary / License
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executal
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-or-later
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.19.0	A python refactoring library / LGPL 3.0

Table 54 – continued from previou

Name	Version	Summary / License
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Python binding of the cross-platform builder toolkit for Qt. / Commercial
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.1.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help f
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2021.3.17	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain A
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT

Table 54 – continued from previou

Name	Version	Summary / License
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for 64-bit Linux on IBM Power CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-l
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
bitarray	2.3.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2

Name	Version	Summary / License
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively ma
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.78.0	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
expat	2.4.1	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	2021.8.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l

Name	Version	Summary / License
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
h5py	3.2.1	Read and write HDF5 files from Python / BSD-3-Clause
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	7.0.1	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.78.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach

Name	Version	Summary / License
libnghttp2	1.41.0	This is an implementation of Hypertext Transfer Protocol version 2. / MI
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	2.0.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open

Name	Version	Summary / License
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executal
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyodbc	4.0.31	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.4	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT

Name	Version	Summary / License
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.2.1	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help f
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.13.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain A
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1

Name	Version	Summary / License
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for 64-bit Linux on ARMv8 CPUs with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
adwaita-icon-theme	40.1.1	The default icon theme used by the GNOME desktop / LGPL-3.0-or-later
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
arrow	0.13.1	Better dates & times for Python / Apache-2.0
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-l
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
at-spi2-atk	2.34.2	bridge for AT-SPI and ATK accessibility technologies / LGPL-2.1-or-late
at-spi2-core	2.36.0	D-Bus-based implementation of AT-SPI accessibility framework / LGPL-
atk-1.0	2.36.0	Accessibility Toolkit. / LGPL-2.0-or-later
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing classes

Name	Version	Summary / License
autopep8	1.5.7	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text.
bitarray	1.7.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively ma
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cookiecutter	1.7.2	A command-line utility that creates projects from cookiecutters (project t
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0

Name	Version	Summary / License
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
epoxy	1.5.4	A library for handling OpenGL function pointer management for you. / M
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
expat	2.4.1	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	2021.8.1	A specification for pythonic filesystems / BSD-3-Clause
gdk-pixbuf	2.38.2	GdkPixbuf is a library for image loading and manipulation. / LGPL-2.1-o
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.21.0	Internationalization package / GPL-2.0
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
gobject-introspection	1.68.0	Middleware for binding GObject-based code to other languages. / LGPL-
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
gtk3	3.24.21	Version 3 of the Gtk+ graphical toolkit / LGPL-2.0-or-later
h5py	3.1.0	Read and write HDF5 files from Python / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.12.0	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
hicolor-icon-theme	0.17	Fallback theme for FreeDesktop.org icon themes / GPL-2.0-or-later
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT

Name	Version	Summary / License
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.7.1	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible computing, ba
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.36.1	A set of programming tools for creating and managing binary programs, c
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcups	2.2.12	CUPS is the standards-based, open source printing system / LGPL-2.0-or
libcurl	7.71.1	tool and library for transferring data with URL syntax / curl
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libevent	2.1.10	An event notification library. / BSD-3-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	10.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran5	10.2.0	Fortran compiler and libraries from the GNU Compiler Collection / GPL
libgomp	10.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libopenblas	0.3.13	An Optimized BLAS library / BSD

Name	Version	Summary / License
libpng	1.6.37	PNG reference library / zlib/libpng
libpq	12.2	The postgres runtime libraries and utilities (not the server itself) / Postgre
librsvg	2.50.7	librsvg is a library to render SVG files using cairo. / LGPL-2.1-or-later
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	10.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxkbcommon	1.0.1	keymap handling library for toolkits and window systems / MIT/X11 Der
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.37.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
mypy_extensions	0.4.1	Experimental type system extensions for programs checked with the myp
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / BSD-3
ninja	1.10.2	A small build system with a focus on speed / Apache 2.0
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause

Name	Version	Summary / License
numba	0.54.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executab
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-or-later

Name	Version	Summary / License
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.15.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / M
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.15.2	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.1.1	Jupyter Qt Console / BSD-3-Clause
qtpy	1.10.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.19.0	A python refactoring library / LGPL 3.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Python binding of the cross-platform builder toolkit for Qt. / Commercial
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT

Name	Version	Summary / License
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.23	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.13.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain A
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
whichcraft	0.6.1	This package provides cross-platform cross-python shutil.which functiona
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.1	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh

Name	Version	Summary / License
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.11 for 64-bit Linux with Python 3.9

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.9.0	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	2.1.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.10.1	Tool for encapsulating, running, and reproducing data science projects /
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
arrow	0.13.1	Better dates & times for Python / Apache-2.0
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.6.6	A abstract syntax tree for Python with inference support. / LGPL-2.1-or-
astropy	4.3.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	21.2.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.7	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.10.0	Python library designed for screen-scraping / MIT
binaryornot	0.4.4	Ultra-lightweight pure Python package to check if a file is binary or text.
bitarray	2.3.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	Linear Algebra PACKage / BSD-3-Clause
bleach	4.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0

Name	Version	Summary / License
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.4.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.10.26	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2021.10.8	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.6	Foreign Function Interface for Python calling C code. / MIT
cfitsio	3.470	A library for reading and writing FITS files / fitsio
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
charset-normalizer	2.0.4	The Real First Universal Charset Detector. Open, modern and actively ma
click	8.0.3	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	2.0.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.6	tools for building conda packages / BSD 3-Clause
conda-content-trust	0.1.1	Signing and verification tools for conda / BSD-3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-token	0.3.0	Set repository access token / BSD-3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cookiecutter	1.7.2	A command-line utility that creates projects from cookiecutters (project t
cryptography	3.4.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.78.0	tool and library for transferring data with URL syntax / curl
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.24	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
daal4py	2021.3.0	A convenient Python API to Intel (R) oneAPI Data Analytics Library / A
dal	2021.3.0	Intel® oneDAL runtime libraries / Intel Simplified Software License
dask	2021.10.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.10.0	Parallel Python with task scheduling / BSD-3-Clause
dataclasses	0.8	An implementation of PEP 557: Data Classes / Apache-2.0
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
debugpy	1.4.1	An implementation of the Debug Adapter Protocol for Python / MIT
decorator	5.1.0	Better living through Python with decorators. / BSD-2-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.10.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedication a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.1.0	An implementation of lxml.xmlfile for the standard library / MIT AND P
expat	2.4.1	Expat XML parser library in C / MIT

Name	Version	Summary / License
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.3.1	A platform independent file lock. / Public Domain
flake8	3.9.2	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
fonttools	4.25.0	fontTools is a library for manipulating fonts, written in Python. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	2021.8.1	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.8.0	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.69.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.1.1	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.3.0	Read and write HDF5 files from Python / BSD-3-Clause
harfbuzz	2.8.1	An OpenType text shaping engine. / MIT
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	3.2	Internationalized Domain Names in Applications (IDNA). / BSD-3-Claus
imagecodecs	2021.8.26	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	4.8.1	A library to access the metadata for a Python package / Apache-2.0
inflection	0.5.1	A port of Ruby on Rails inflector to Python / MIT
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	6.4.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.29.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.5	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.9.3	A Python utility / library to sort Python imports. / MIT
itsdangerous	2.0.1	Various helpers to pass trusted data to untrusted environments. / BSD-3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.18.0	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.7.1	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
jinja2-time	0.2.0	Jinja2 Extension for Dates and Times / MIT
joblib	1.1.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license

Name	Version	Summary / License
json5	0.9.6	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.8.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.2.1	An extensible environment for interactive and reproducible computing, ba
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.8.2	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
keyring	23.1.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.35.1	A set of programming tools for creating and managing binary programs,
lerc	3.0	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.78.0	tool and library for transferring data with URL syntax / curl
libdeflate	1.8	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210910	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / MIT
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm11	11.1.0	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libnghttp2	1.41.0	This is an implementation of Hypertext Transfer Protocol version 2. / MI
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.12	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.37.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause

Name	Version	Summary / License
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.4.3	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-inline	0.1.2	Inline Matplotlib backend for Jupyter / BSD-3-Clause
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.4.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.4.0	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.3.1	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.2.2	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.10.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpi	1.0	A high performance widely portable implementation of the MPI standard
mpich	3.3.2	A high performance widely portable implementation of the MPI standard
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
munkres	1.1.4	The Munkres module provides an O(n^3) implementation of the Munkres
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the myp
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.1.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.3	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.6.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.4.5	Jupyter Notebook / BSD-3-Clause
numba	0.54.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.4.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.9	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1l	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	21.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.3.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.8.2	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.13	A small utility to modify the dynamic linker and RPATH of ELF executal

Name	Version	Summary / License
path	16.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.6	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.(
patsy	0.5.2	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.45	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.4.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
poyo	0.5.0	A lightweight YAML Parser for Python / MIT
prometheus_client	0.11.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.20	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.44.1	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.1.1	Python docstring style checker (formerly pep257) / MIT
pyerfa	2.0.0	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.10.0	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.9.6	python code static checker / GPL-2.0-or-later
pyls-spyder	0.4.0	Spyder extensions for the python-lsp-server / MIT
pyodbc	4.0.31	DB API Module for ODBC / MIT
pyopenssl	21.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	3.0.4	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.18.0	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.4	Simple and powerful testing with Python. / MIT
python	3.9.7	General purpose programming language / Python-2.0
python-dateutil	2.8.2	Extensions to the standard Python datetime module. / BSD-3-Clause and
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python-lsp-black	1.0.0	Black plugin for the Python LSP Server / MIT
python-lsp-jsonrpc	1.0.0	A Python 3.6+ server implementation of the JSON RPC 2.0 protocol. / M
python-lsp-server	1.2.4	An implementation of the Language Server Protocol for Python / MIT
python-slugify	5.0.2	A Python Slugify application that handles Unicode / MIT
pytz	2021.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT

Name	Version	Summary / License
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	6.0	YAML parser and emitter for Python / MIT
pyzmq	22.2.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	3.0.2	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qstylizer	0.1.10	Qt stylesheet generation utility for PyQt/PySide / MIT
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0-only
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.1.1	Jupyter Qt Console / BSD-3-Clause
qtpy	1.10.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.8.3	Alternative regular expression module, to replace re / Apache 2.0
requests	2.26.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.19.0	A python refactoring library / LGPL 3.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.3	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.2	A set of python modules for machine learning and data mining / BSD-3-C
scikit-learn-intelex	2021.3.0	Intel(R) Extension for Scikit-learn is a seamless way to speed up your Sci
scipy	1.7.1	Scientific Library for Python / BSD-3-Clause
seaborn	0.11.2	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.8.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	58.0.4	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.7.0	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Python binding of the cross-platform builder toolkit for Qt. / Commercial
six	1.16.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.4.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	2.0.0	sphinxcontrib-htmlhelp is a sphinx extension which renders HTML help f
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.5	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	5.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	2.1.3	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.22	Database Abstraction Library. / MIT
sqlite	3.36.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.9	Python library for symbolic mathematics / BSD-3-Clause
tbb	2021.4.0	High level abstract threading library / Apache-2.0

Name	Version	Summary / License
tbb4py	2021.4.0	TBB module for Python / Apache 2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.5.0	Testpath is a collection of utilities for Python code working with files and
text-unidecode	1.3	The most basic Text::Unidecode port / Artistic
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.2.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2021.7.2	Read and write image data from and to TIFF files. / BSD-3-Clause
tinycss	0.4	Tinycss is a complete yet simple CSS parser for Python. / BSD-3-Clause
tk	8.6.11	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.62.3	A Fast, Extensible Progress Meter / MPL-2.0 AND MIT
traitlets	5.1.0	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.3	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.10.0.2	Backported and Experimental Type Hints for Python / PSF-2.0
tzdata	2021e	The Time Zone Database (called tz, tzdb or zoneinfo) / Public-Domain A
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unidecode	1.2.0	ASCII transliterations of Unicode text / GPL-2.0-or-later
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.7	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	2.1.3	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	2.0.2	The comprehensive WSGI web application library. / BSD-3-Clause
wheel	0.37.0	A built-package format for Python. / MIT
whichcraft	0.6.1	This package provides cross-platform cross-python shutil.which functiona
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.1	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	3.0.1	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.4.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 (May 13, 2021)

User-facing changes

- Anaconda Navigator has been updated to 2.0.3
- Conda has been updated to 4.10.1
- Added support for the 64-bit AWS Graviton2 (ARM64) platform
- Added support for the 64-bit Linux on IBM Z & LinuxONE (s390x) platform
- Meta-packages are available for Python 3.7, 3.8 and 3.9. The installer uses Python 3.8.
- EULA has been updated to include a more complete cryptography list
- On macOS, all available shells are now initialized for conda as part of the default macOS .pkg installation.

Major package updates

- anaconda-project 0.8.4 -> 0.9.1
- bokeh 2.2.3 -> 2.3.2
- dask 2.30.0 -> 2021.4.0
- ipython 7.19.0 -> 7.22.0
- jupyter_client 6.1.7 -> 6.1.12
- jupyter_console 6.2.0 -> 6.4.0
- jupyter_core 4.6.3 -> 4.7.1
- jupyterlab 2.2.6 -> 3.0.14
- jupyterlab_server 1.2.0 -> 2.4.0
- numba 0.51.2 -> 0.53.1
- numpy 1.19.2 -> 1.20.1
- pandas 1.1.3 -> 1.2.4
- pillow 8.0.1 -> 8.2.0
- python 3.8.5 -> 3.9.4
- requests 2.24.0 -> 2.25.1
- scipy 1.5.2 -> 1.6.2
- seaborn 0.11.0 -> 0.11.1
- spyder 4.1.5 -> 4.2.5
- spyder-kernels 1.9.4 -> 1.10.2
- statsmodels 0.12.0 -> 0.12.2
- sympy 1.6.2 -> 1.8

Added:

- jupyter-packaging 0.7.12
- jupyter_server 1.4.1

- jupyterlab_widgets 1.0.0

Packages

Anaconda 2021.05 for 64-bit Windows with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PE
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.3.2	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossl
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.9	pure Python COM package / MIT
conda	4.10.1	OS-agnostic, system-level binary package and environment manage

Name	Version	Summary / License
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imagecodecs	2021.3.31	Image transformation, compression, and decompression codecs / BS
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause

Name	Version	Summary / License
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	2.2.1	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compr
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3

Name	Version	Summary / License
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / I
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numba	0.53.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis too
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic

Name	Version	Summary / License
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Name	Version	Summary / License
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BS
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.3	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tiffile	2021.4.8	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause

Name	Version	Summary / License
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support / A
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL-3.0-o
zfp	0.5.5	Library for compressed numerical arrays that support high throughp
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for 32-bit Windows with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT

Table 59 – continued from prev

Name	Version	Summary / License
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PE
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.3.2	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.9	pure Python COM package / MIT
conda	4.10.1	OS-agnostic, system-level binary package and environment manage
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause

Table 59 – continued from prev

Name	Version	Summary / License
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedicts
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like appl

Table 59 – continued from prev

Name	Version	Summary / License
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / B
nltk	3.6.1	Natural Language Toolkit / Apache 2.0

Table 59 – continued from prev

Name	Version	Summary / License
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numba	0.53.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis too
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.2	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li

Table 59 – continued from prev

Name	Version	Summary / License
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.1	A set of python modules for machine learning and data mining / BS
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp

Table 59 – continued from prev

Name	Version	Summary / License
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.0	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL-3.0-o

Table 59 – continued from prev

Name	Version	Summary / License
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for macOS on Intel 64-bit with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT

Table 60 – continued from previou

Name	Version	Summary / License
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.21.0	Internationalization package / GPL-2.0
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 60 – continued from previou

Name	Version	Summary / License
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	10.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause

Table 60 – continued from previou

Name	Version	Summary / License
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	10.0.0	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numba	0.53.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause

Table 60 – continued from previou

Name	Version	Summary / License
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.(
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop / P
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT

Table 60 – continued from previou

Name	Version	Summary / License
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.3	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau

Table 60 – continued from previou

Name	Version	Summary / License
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.0	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for 64-bit Linux on IBM Z CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B

Table 61 – continued from previou

Name	Version	Summary / License
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT

Table 61 – continued from previou

Name	Version	Summary / License
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.3.1	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var

Table 61 – continued from previou

Name	Version	Summary / License
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.33.1	A set of programming tools for creating and managing binary programs,
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause

Table 61 – continued from previou

Name	Version	Summary / License
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.16.0	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT

Table 61 – continued from previou

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.1.1	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.18.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	51.1.2	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause

Table 61 – continued from previou

Name	Version	Summary / License
sqlalchemy	1.3.17	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / I
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tifffile	2021.3.31	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. / I
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.2.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for 64-bit Linux on IBM Power CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0

Table 62 – continued from previou

Name	Version	Summary / License
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter proto
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT

Table 62 – continued from previou

Name	Version	Summary / License
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.10	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT

Table 62 – continued from previou

Name	Version	Summary / License
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.10	An optimized BLAS library / BSD
openblas-devel	0.3.10	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount

Table 62 – continued from previou

Name	Version	Summary / License
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0

Table 62 – continued from previou

Name	Version	Summary / License
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for 64-bit Linux on ARMv8 CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.7.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	

Name	Version	Summary / License
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT

Name	Version	Summary / License
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.1.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.12.0	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.1	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause

Name	Version	Summary / License
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.36.1	A set of programming tools for creating and managing binary programs,
lerc	2.2.1	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	10.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran5	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	10.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	10.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause

Name	Version	Summary / License
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numba	0.53.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.11	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT

Name	Version	Summary / License
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.2	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.18.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause

Name	Version	Summary / License
sqlalchemy	1.3.23	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.2	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2021.3.31	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.2.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.05 for 64-bit Linux with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	2.1.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.2	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (

Table 64 – continued from previou

Name	Version	Summary / License
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.4.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.17.1	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause

Table 64 – continued from previou

Name	Version	Summary / License
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MIT
jeepney	0.6.0	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT

Table 64 – continued from previou

Name	Version	Summary / License
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numba	0.53.1	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT

Table 64 – continued from previou

Name	Version	Summary / License
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.(
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q

Table 64 – continued from previou

Name	Version	Summary / License
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	4.0.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.15	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.3	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause

Table 64 – continued from previou

Name	Version	Summary / License
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.0	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 (May 7, 2021)

Packages

Anaconda 2021.04 for 64-bit Windows with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.

Name	Version	Summary / License
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PE
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossl
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.9	pure Python COM package / MIT
conda	4.10.1	OS-agnostic, system-level binary package and environment manage
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python langu

Name	Version	Summary / License
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imagecodecs	2021.3.31	Image transformation, compression, and decompression codecs / BS
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT

Name	Version	Summary / License
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
lerc	2.2.1	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compr
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common proba

Name	Version	Summary / License
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / I
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis too
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC

Name	Version	Summary / License
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BS
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all

Name	Version	Summary / License
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tifffile	2021.4.8	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause

Name	Version	Summary / License
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnir
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) sp
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL-3.0-o
zfp	0.5.5	Library for compressed numerical arrays that support high throughp
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for 32-bit Windows with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science proje
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop
appdirs	1.4.4	A small Python module for determining appropriate platform-speci
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PE
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu

Table 66 – continued from prev

Name	Version	Summary / License
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.9	pure Python COM package / MIT
conda	4.10.1	OS-agnostic, system-level binary package and environment manage
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT

Table 66 – continued from prev

Name	Version	Summary / License
gevent	21.1.2	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python.
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like app
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC

Table 66 – continued from prev

Name	Version	Summary / License
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	GNU Compiler Collection (libgfortran) for MinGW-w64 / GPL, LG
m2w64-gcc-libs	5.3.0	None / GPL3+, partial:GCCRLE, partial:LGPL2+
m2w64-gcc-libs-core	5.3.0	GNU Compiler Collection (core libraries) for MinGW-w64 / GPL3
m2w64-gmp	6.1.0	None / LGPL3
m2w64-libwinpthread-git	5.0.0.4634.697f757	None / MIT, BSD
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / B
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis too

Table 66 – continued from prev

Name	Version	Summary / License
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / M
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python
psutil	5.8.0	A cross-platform process and system utilities module for Python / B
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.2	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0

Table 66 – continued from prev

Name	Version	Summary / License
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF-2.0
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.1	A set of python modules for machine learning and data mining / BS
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause

Table 66 – continued from prev

Name	Version	Summary / License
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
textdistance	4.2.1	TextDistance – python library for comparing distance between two
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings /
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, ori
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.2	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.27.29016	MSVC runtimes associated with cl.exe version 19.27.29111 (VS 20
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL-3.0-
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for macOS on Intel 64-bit with Python 3.8

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.2	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.2	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa

Table 67 – continued from previou

Name	Version	Summary / License
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.21.0	Internationalization package / GPL-2.0
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0

Table 67 – continued from previou

Name	Version	Summary / License
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter proto
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	10.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	10.0.0	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based

Table 67 – continued from previou

Name	Version	Summary / License
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the mypy
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT

Table 67 – continued from previou

Name	Version	Summary / License
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python.app	3	Proxy on macOS letting Python libraries hook into the GUI event loop /
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause

Table 67 – continued from previou

Name	Version	Summary / License
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. / M
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M

Table 67 – continued from previou

Name	Version	Summary / License
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.0	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.23.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for 64-bit Linux on IBM Z CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	4.5	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster

Table 68 – continued from previou

Name	Version	Summary / License
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A "smart font" system that handles the complexities of lesser-known lang

Table 68 – continued from previou

Name	Version	Summary / License
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.10.6	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter proto
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.3.1	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-s390x	2.33.1	A set of programming tools for creating and managing binary programs,
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.3.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio

Table 68 – continued from previou

Name	Version	Summary / License
libgfortran-ng	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran4	7.5.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	9.3.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.3.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD

Table 68 – continued from previou

Name	Version	Summary / License
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.16.0	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.1.1	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause

Table 68 – continued from previou

Name	Version	Summary / License
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.18.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	51.1.2	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.17	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2021.3.31	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0

Table 68 – continued from previou

Name	Version	Summary / License
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.2.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for 64-bit Linux on IBM Power CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster

Table 69 – continued from previou

Name	Version	Summary / License
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause

Table 69 – continued from previou

Name	Version	Summary / License
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.10	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System

Table 69 – continued from previou

Name	Version	Summary / License
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.10	An optimized BLAS library / BSD
openblas-devel	0.3.10	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT

Table 69 – continued from previou

Name	Version	Summary / License
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
six	1.15.0	Python 2 and 3 compatibility utilities / MIT

Table 69 – continued from previou

Name	Version	Summary / License
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1

Table 69 – continued from previou

Name	Version	Summary / License
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for 64-bit Linux on ARMv8 CPUs with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
_openmp_mutex	5.1	OpenMP Implementation Mutex / BSD-3-Clause
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.7.0	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotli	1.0.9	Brotli compression format / MIT
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
brunsli	0.1	Practical JPEG Repacker / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cached-property	1.5.2	A decorator for caching properties in classes. / BSD-3-Clause
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
charls	2.2.0	CharLS is a C++ implementation of the JPEG-LS standard for lossless an
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause

Name	Version	Summary / License
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
giflib	5.2.1	Library for reading and writing gif images / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.1	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.1	Library for constructing graphs of media-handling components / LGPL 2
h5py	3.1.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.12.0	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	68.1	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagecodecs	2021.1.11	Image transformation, compression, and decompression codecs / BSD-3-
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0

Name	Version	Summary / License
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
jxrlib	1.1	jxrlib - JPEG XR Library by Microsoft, built from Debian hosted sources
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.19.1	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-aarch64	2.36.1	A set of programming tools for creating and managing binary programs,
lerc	2.2.1	LERC - Limited Error Raster Compression / Apache-2.0
libaec	1.0.4	Adaptive Entropy Coding library / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libdeflate	1.7	libdeflate is a library for fast, whole-buffer DEFLATE-based compressior
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled a
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	10.2.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgfortran5	10.2.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
libgomp	10.2.0	The GCC OpenMP implementation. / GPL-3.0-only WITH GCC-excepti
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libopenblas	0.3.13	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	10.2.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3

Name	Version	Summary / License
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp	1.2.0	WebP image library / Google
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
libzopfli	1.0.3	A compression library programmed in C to perform very good, but slow,
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.13	An optimized BLAS library / BSD
openblas-devel	0.3.13	OpenBLAS headers and libraries for developing software that used Open
openjpeg	2.3.0	An open-source JPEG 2000 codec written in C / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0

Name	Version	Summary / License
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.11	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.7.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyerfa	1.7.2	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.3.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0

Name	Version	Summary / License
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
rope	0.18.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.80	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.25	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.8	A fast compressor/decompressor / BSD 3-clause
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.23	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2021.3.31	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause

Name	Version	Summary / License
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zfp	0.5.5	Library for compressed numerical arrays that support high throughput rea
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.2.0	Interfaces for Python / ZPL-2.1
zstd	1.4.9	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2021.04 for 64-bit Linux with Python 3.8

Name	Version	Summary / License
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	2.0.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.9.1	Tool for encapsulating, running, and reproducing data science projects / B
anyio	2.2.0	High level compatibility layer for multiple asynchronous event loop imple
appdirs	1.4.4	A small Python module for determining appropriate platform-specific dir
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.5	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.2.1	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.6	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.9.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
black	19.10b0	The Uncompromising Code Formatter / MIT
blas	1.0	

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Name	Version	Summary / License
bleach	3.3.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.21.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.3.1	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
c-ares	1.17.1	This is c-ares, an asynchronous resolver library / MIT
ca-certificates	2021.4.13	Certificates for use with other packages. / MPL 2.0
cairo	1.16.0	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.12.5	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.5	Foreign Function Interface for Python calling C code. / MIT
chardet	4.0.0	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.10.1	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.21.4	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.4.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.23	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2021.4.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2021.4.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	5.0.6	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.7.1	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2021.4.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.17	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.3.0	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.9.0	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.1	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.9.0	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	21.1.2	Coroutine-based network library / MIT
glib	2.68.1	Provides core application building blocks for libraries and applications w

Table 71 – continued from previou

Name	Version	Summary / License
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.2.1	The GNU multiprecision library. / GPL-2.0-or-later AND LGPL-3.0-or-l
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A "smart font" system that handles the complexities of lesser-known lang
greenlet	1.0.0	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.8.0	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	3.10.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.22.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.6.3	Jupyter Interactive Widgets / BSD-3-Clause
isort	5.8.0	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.6.0	Pure Python DBus interface / MIT
jinja2	2.11.3	An easy to use stand-alone template engine written in pure python. / BSD
joblib	1.0.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter-packaging	0.7.12	Jupyter Packaging Utilities / BSD-3-Clause
jupyter_client	6.1.12	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.4.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.7.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyter_server	1.4.1	Jupyter Server / BSD-3-Clause
jupyterlab	3.0.14	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	2.4.0	A set of server components for JupyterLab and JupyterLab like applicatio
jupyterlab_widgets	1.0.0	JupyterLab extension providing HTML widgets / BSD-3-Clause
keyring	22.3.0	Store and access your passwords safely / MIT
kiwisolver	1.3.1	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.6.0	A fast and thorough lazy object proxy / BSD-2-Clause

Table 71 – continued from previou

Name	Version	Summary / License
lcms2	2.12	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20210216	Editline Library (libedit) / BSD-2-Clause
libev	4.33	A full-featured and high-performance event loop that is loosely modeled
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL-3.0-only WITH GCC-exceptio
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL-3.0-only WITH GCC-exceptio
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL-3.0-only WITH GCC-exception-3
libtiff	4.2.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libuv	1.40.0	Cross-platform asynchronous I/O / MIT
libwebp-base	1.2.0	WebP image library / BSD-3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.36.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.1	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.3	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.3	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.4	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2021.2.0	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.3.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.2.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.3	A library for testing in Python / BSD-2-Clause
more-itertools	8.7.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.2.1	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.2	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
mypy_extensions	0.4.3	Experimental type system extensions for programs checked with the myp
nbclassic	0.2.6	Jupyter Notebook as a Jupyter Server Extension. / BSD-3-Clause
nbclient	0.5.3	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.1.3	The Jupyter Notebook format / BSD-3-Clause

Table 71 – continued from previou

Name	Version	Summary / License
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.5.1	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.6.1	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.3.0	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.3	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.20.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1k	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.9	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.2.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.12	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.2.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.1.2	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathspec	0.7.0	Utility library for gitignore style pattern matching of file paths. / MPL-2.0
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	21.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.7.0	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.10.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.17	Library for building powerful interactive command lines in Python / BSD
psutil	5.8.0	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.7.0	Run a subprocess in a pseudo terminal / ISC
py	1.10.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	6.0.0	Python docstring style checker (formerly pep257) / MIT
pyerfa	1.7.3	Python bindings for ERFA routines / BSD-3-Clause
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT

Table 71 – continued from previou

Name	Version	Summary / License
pygments	2.8.1	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.7.4	python code static checker / GPL-2.0-only
pyls-black	0.4.6	Black plugin for the Python Language Server / MIT
pyls-spyder	0.3.2	Spyder extensions for the python-language-server / MIT
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	20.0.1	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.2.3	Simple and powerful testing with Python. / MIT
python	3.8.8	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.36.2	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2021.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.4.1	YAML parser and emitter for Python / MIT
pyzmq	20.0.0	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.2	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	5.0.3	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.1	library for editing command lines as they are typed in / GPL-3.0
regex	2021.4.4	Alternative regular expression module, to replace re / Python-2.0
requests	2.25.1	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.7	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.100	A patched copy of ruamel.yaml. / MIT
scikit-image	0.18.1	Image processing in Python. / BSD-3-Clause
scikit-learn	0.24.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.6.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.1	Statistical data visualization / BSD 3-Clause
secretstorage	3.3.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	52.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.6.1	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
sniffio	1.2.0	Sniff out which async library your code is running under / Apache-2.0
snowballstemmer	2.1.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	2.1.0	Python Sorted Collections / Apache-2.0
sortedcontainers	2.3.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.2.1	A modern CSS selector implementation for BeautifulSoup / MIT

Table 71 – continued from previou

Name	Version	Summary / License
sphinx	3.5.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.2.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.10.2	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.4.7	Database Abstraction Library. / MIT
sqlite	3.35.4	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.12.2	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.8	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.4	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
textdistance	4.2.1	TextDistance – python library for comparing distance between two or mo
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
three-merge	0.1.1	Simple Python library to perform a 3-way merge between strings / MIT
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD-3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.2	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.1	A Python web framework and asynchronous networking library, originall
tqdm	4.59.0	A Fast, Extensible Progress Meter / MPL-2.0 or MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.2	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.2	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.26.4	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	1.0.2	Filesystem events monitoring / Apache-2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.36.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.12.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.1.0	Capture C-level stdout/stderr in Python / MIT
xlrd	2.0.1	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.8	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.31.0	A formatter for Python files / Apache 2.0
zeromq	4.3.4	A high-performance asynchronous messaging library. / LGPL-3.0-or-late
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause

Table 71 – continued from previou

Name	Version	Summary / License
zipp	3.4.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.3.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.11 (Nov 19, 2020)

User-facing changes

- Anaconda Navigator has been updated to 1.10.0.
- The Python 3.6 meta-package was dropped; meta-packages are now available for Python 3.7 and 3.8 only. The installer uses Python 3.8.
- Update PyCharm text and links in the GUI installers.
- Clarify EULA for repo.anaconda.com terms-of-service.

Major package updates

- bokeh 2.1.1 -> 2.2.3
- dask 2.20.0 -> 2.30.0
- ipython 7.16.1 -> 7.19.0
- jupyter_client 6.1.6 -> 6.1.7
- jupyter_console 6.1.0 -> 6.2.0
- jupyterlab 2.1.5 -> 2.2.6
- numba 0.50.1 -> 0.51.2
- numpy 1.18.5 -> 1.19.2
- pandas 1.0.5 -> 1.1.3
- pillow 7.2.0 -> 8.0.1
- python 3.8.3 -> 3.8.5
- scikit-learn 0.23.1 -> 0.23.2
- scipy 1.5.0 -> 1.5.2
- seaborn 0.10.1 -> 0.11.0
- spyder 4.1.4 -> 4.1.5
- spyder-kernels 1.9.2 -> 1.9.4
- statsmodels 0.11.1 -> 0.12.0
- sympy 1.6.1 -> 1.6.2

Added:

- jupyterlab_pygments 0.1.2

Packages

Anaconda 2020.11 for 64-bit Windows with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.9.2	OS-agnostic, system-level binary package and environment manage
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus

Table 72 – continued from prev

Name	Version	Summary / License
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python.

Table 72 – continued from prev

Name	Version	Summary / License
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	21.4.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0

Table 72 – continued from prev

Name	Version	Summary / License
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's Exe
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BS
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks /
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis too
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python
psutil	5.7.2	A cross-platform process and system utilities module for Python / B
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT

Table 72 – continued from prev

Name	Version	Summary / License
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.6.0	python code static checker / GPL-2.0-only
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BS
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful

Table 72 – continued from prev

Name	Version	Summary / License
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, ori
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL 3

Table 72 – continued from prev

Name	Version	Summary / License
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.11 for 32-bit Windows with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause

Table 73 – continued from prev

Name	Version	Summary / License
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.9.2	OS-agnostic, system-level binary package and environment manage
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause

Table 73 – continued from prev

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python.
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	21.4.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.8.5	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.1	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop

Table 73 – continued from prev

Name	Version	Summary / License
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BS
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks /
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis too
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python
psutil	5.7.2	A cross-platform process and system utilities module for Python / B

Table 73 – continued from prev

Name	Version	Summary / License
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.6.0	python code static checker / GPL-2.0-only
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.1	A set of python modules for machine learning and data mining / BS
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT

Table 73 – continued from prev

Name	Version	Summary / License
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, ori
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause

Table 73 – continued from prev

Name	Version	Summary / License
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.11 for macOS on Intel 64-bit with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.1	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause

Table 74 – continued from previou

Name	Version	Summary / License
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT

Table 74 – continued from previou

Name	Version	Summary / License
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2019.4	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.4.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	10.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT

Table 74 – continued from previou

Name	Version	Summary / License
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	10.0.0	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT

Table 74 – continued from previou

Name	Version	Summary / License
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0

Table 74 – continued from previou

Name	Version	Summary / License
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. /

Table 74 – continued from previou

Name	Version	Summary / License
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.1	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.11 for 64-bit Linux on IBM Power CPUs with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	

Table 75 – continued from previou

Name	Version	Summary / License
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d

Table 75 – continued from previou

Name	Version	Summary / License
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.10	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause

Table 75 – continued from previou

Name	Version	Summary / License
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.10	An optimized BLAS library / BSD
openblas-devel	0.3.10	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executab
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR

Table 75 – continued from previou

Name	Version	Summary / License
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT

Table 75 – continued from previou

Name	Version	Summary / License
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.11 for 64-bit Linux with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause

Table 76 – continued from previou

Name	Version	Summary / License
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.4.0	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0

Table 76 – continued from previou

Name	Version	Summary / License
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.5.0	Pure Python DBus interface / MIT
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter proto
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.4.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause

Table 76 – continued from previou

Name	Version	Summary / License
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT

Table 76 – continued from previou

Name	Version	Summary / License
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause

Table 76 – continued from previou

Name	Version	Summary / License
secretstorage	3.1.2	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.3	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. / M
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause

Table 76 – continued from previou

Name	Version	Summary / License
wurlitzer	2.0.1	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.07 (Jul 23, 2020)

User-facing changes

- The installer and base environment now use Python 3.8. Meta-packages for Python 3.6, 3.7, and 3.8 are also available.
- Fixed an issue where the win-32 installer would install win-64 executables in the base environment.
- Fixed an issue where the Windows installer would hang on systems with >64 cores.
- Update PyCharm text and links in the GUI installers.
- Update EULA to reflect terms-of-service change for repo.anaconda.com

Backend improvements (non-visible changes)

- Fixed signing of PyCharm bundle for macOS 10.15

Major package updates

- bokeh 1.4.0 -> 2.1.1
- dask 2.11.0 -> 2.20.0
- ipython 7.12.0 -> 7.16.1
- jupyter_client 5.3.4 -> 6.1.6
- jupyter_core 4.6.1 -> 4.6.3
- jupyterlab 1.2.6 -> 2.1.5
- jupyterlab_server 1.0.6 -> 1.2.0

- matplotlib 3.1.3 -> 3.2.2
- numba 0.48.0 -> 0.50.1
- numpy 1.18.1 -> 1.18.5
- pandas 1.0.1 -> 1.0.5
- pillow 7.0.0 -> 7.2.0
- python 3.8.1 -> 3.8.3
- requests 2.22.0 -> 2.24.0
- scikit-learn 0.22.1 -> 0.23.1
- scipy 1.4.1 -> 1.5.0
- seaborn 0.10.0 -> 0.10.1
- spyder 4.0.1 -> 4.1.4
- spyder-kernels 1.8.1 -> 1.9.2
- statsmodels 0.11.0 -> 0.11.1
- sympy 1.5.1 -> 1.6.1

Packages

Anaconda 2020.07 for 64-bit Windows with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be

Table 77 – continued from prev

Name	Version	Summary / License
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.9.2	OS-agnostic, system-level binary package and environment manage
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop

Table 77 – continued from prev

Name	Version	Summary / License
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python.
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	21.4.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/

Table 77 – continued from prev

Name	Version	Summary / License
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BS
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / I
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis too
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application

Table 77 – continued from prev

Name	Version	Summary / License
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python
psutil	5.7.2	A cross-platform process and system utilities module for Python / B
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.6.0	python code static checker / GPL-2.0-only
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built w

Table 77 – continued from prev

Name	Version	Summary / License
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BS
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, ori
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0

Table 77 – continued from prev

Name	Version	Summary / License
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character code
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.07 for 32-bit Windows with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Cla
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu

Table 78 – continued from prev

Name	Version	Summary / License
bcrypt	3.2.0	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.9.2	OS-agnostic, system-level binary package and environment manage
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional util
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languag
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT

Table 78 – continued from prev

Name	Version	Summary / License
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python.
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CS
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	21.4.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.8.5	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT

Table 78 – continued from prev

Name	Version	Summary / License
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / B
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.3.1	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.1	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Prop
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's Exec
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BS
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks /
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Cla
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis too
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.2	SSH2 protocol library / LGPL-2.1-or-later
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause

Table 78 – continued from prev

Name	Version	Summary / License
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python
psutil	5.7.2	A cross-platform process and system utilities module for Python / B
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.6.0	python code static checker / GPL-2.0-only
pynacl	1.4.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause

Table 78 – continued from prev

Name	Version	Summary / License
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built wi
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.1	A set of python modules for machine learning and data mining / BS
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, ori
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0

Table 78 – continued from prev

Name	Version	Summary / License
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode string
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.2	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.0	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.07 for macOS on Intel 64-bit with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.1	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl

Table 79 – continued from previou

Name	Version	Summary / License
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT

Table 79 – continued from previou

Name	Version	Summary / License
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2019.4	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.4.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS

Table 79 – continued from previou

Name	Version	Summary / License
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	10.0.0	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.16	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	10.0.0	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause

Table 79 – continued from previou

Name	Version	Summary / License
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount

Table 79 – continued from previou

Name	Version	Summary / License
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine / P

Table 79 – continued from previou

Name	Version	Summary / License
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.1	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.20.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.07 for 64-bit Linux on IBM Power CPUs with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0

Table 80 – continued from previou

Name	Version	Summary / License
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter proto
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause

Table 80 – continued from previou

Name	Version	Summary / License
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.10	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause

Table 80 – continued from previou

Name	Version	Summary / License
openblas	0.3.10	An optimized BLAS library / BSD
openblas-devel	0.3.10	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT

Table 80 – continued from previou

Name	Version	Summary / License
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tifffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause

Table 80 – continued from previou

Name	Version	Summary / License
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.07 for 64-bit Linux with Python 3.8

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
argh	0.26.2	The Natural CLI. / LGPL 3
argon2-cffi	20.1.0	The secure Argon2 password hashing algorithm. / MIT
asn1crypto	1.4.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.4.2	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0.2	Community-developed Python Library for Astronomy / BSD-3-Clause
async_generator	1.10	Async generators and context managers for Python 3.5+ / MIT
atomicwrites	1.4.0	Atomic file writes / MIT
attrs	20.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.5.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.1	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.2.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.9.3	Python library designed for screen-scraping / MIT
bitarray	1.6.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.2.1	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.20.1	A blocking, shuffling and loss-less compression library that can be faster
bokeh	2.2.3	Statistical and novel interactive HTML plots for Python / BSD-3-Clause

Table 81 – continued from previou

Name	Version	Summary / License
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.10.14	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2020.6.20	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.1.2	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.6.0	Extended pickling support for Python objects / BSD-3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.4	Cross-platform colored terminal text / BSD-3-Clause
conda	4.9.2	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.20.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	3.1.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.21	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.11.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.30.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.30.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.18	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.2	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20200713	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.30.1	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.10	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.8.4	Your Tool For Style Guide Enforcement / MIT
flask	1.1.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.10.4	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.10	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.8.3	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	20.9.0	Coroutine-based network library / MIT
glib	2.66.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.14	A "smart font" system that handles the complexities of lesser-known lang

Table 81 – continued from previou

Name	Version	Summary / License
greenlet	0.4.17	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	2.4.0	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.10	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.9.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	2.0.0	A library to access the metadata for a Python package / Apache-2.0
iniconfig	1.1.1	iniconfig: brain-dead simple config-ini parsing / MIT
intel-openmp	2020.2	Math library for Intel and compatible processors / LicenseRef-Proprietary
intervaltree	3.1.0	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.3.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.19.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	5.6.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.17.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.5.0	Pure Python DBus interface / MIT
jinja2	2.11.2	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.17.0	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	6.1.7	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.3	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	2.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_pygments	0.1.2	Pygments syntax coloring scheme making use of the JupyterLab CSS var
jupyterlab_server	1.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.4.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.3.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.18.2	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.4.2	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.71.1	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20191231	Editline Library (libedit) / BSD-2-Clause
libffi	3.3	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL

Table 81 – continued from previou

Name	Version	Summary / License
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm10	10.0.1	Development headers and libraries for LLVM / Apache-2.0 WITH LLVM
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.18	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.14	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.10	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.34	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.34.0	A lightweight LLVM python binding for writing JIT compilers. / BSD-2-
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.6.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.9.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
matplotlib-base	3.3.2	Publication quality figures in Python / LicenseRef-PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.2	Math library for Intel and compatible processors / LicenseRef-Proprietary
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.2.0	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.1	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.2	A library for testing in Python / BSD-2-Clause
more-itertools	8.6.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	1.0.0	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbclient	0.5.1	A client library for executing notebooks. Formally nbconvert's ExecutePr
nbconvert	6.0.7	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.8	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
nest-asyncio	1.4.2	Patch asyncio to allow nested event loops / BSD-2-Clause
networkx	2.5	Python package for creating and manipulating complex networks / BSD-3
nltk	3.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.1.4	Jupyter Notebook / BSD-3-Clause
numba	0.51.2	NumPy aware dynamic Python compiler using LLVM / BSD-2-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.19.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	1.1.0	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause

Table 81 – continued from previou

Name	Version	Summary / License
openpyxl	3.0.5	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1h	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.4	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.1.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.11	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.3	A python module for writing pandoc filters / BSD-3-Clause
pango	1.45.3	Text layout and rendering engine. / LGPL-2.1
parso	0.7.0	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.12	A small utility to modify the dynamic linker and RPATH of ELF executal
path	15.0.0	A module wrapper for os.path / MIT
path.py	12.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.44	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	8.0.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.2.4	PyPA recommended tool for installing Python packages / MIT
pixman	0.40.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.6.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.8.0	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.8	Library for building powerful interactive command lines in Python / BSD
psutil	5.7.2	A cross-platform process and system utilities module for Python / BSD-3
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.9.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.6.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.20	Complete C99 parser in pure Python / BSD 3-clause
pycurl	7.43.0.6	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	5.1.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.2.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.7.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.6.0	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.7	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.17.3	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	6.1.1	Simple and powerful testing with Python. / MIT
python	3.8.5	General purpose programming language / Python-2.0
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause

Table 81 – continued from previou

Name	Version	Summary / License
python-jsonrpc-server	0.4.0	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.35.1	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.9	Python interface to libarchive / CC0-1.0
pytz	2020.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.27	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.3.1	YAML parser and emitter for Python / MIT
pyzmq	19.0.2	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8.1	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	1.0.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.7.7	Jupyter Qt Console / BSD-3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	8.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.10.15	Alternative regular expression module, to replace re / Python-2.0
requests	2.24.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	12.1.1	
rope	0.18.0	A python refactoring library / GPL 2.0
rtree	0.9.4	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.17.2	Image processing in Python. / BSD-3-Clause
scikit-learn	0.23.2	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.5.2	Scientific Library for Python / BSD 3-Clause
seaborn	0.11.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.2	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	50.3.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.13	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.15.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.2.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.2.2	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	2.0.1	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	3.2.1	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.2	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.2	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.3	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.3	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.4	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.4	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.1.5	The Scientific Python Development Environment / MIT
spyder-kernels	1.9.4	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.20	Database Abstraction Library. / MIT
sqlite	3.33.0	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.12.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.6.2	Python library for symbolic mathematics / BSD-3-Clause

Table 81 – continued from previou

Name	Version	Summary / License
tbb	2020.3	High level abstract threading library / Apache-2.0
tblib	1.7.0	Traceback serialization library. / BSD 2-Clause
terminado	0.9.1	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tiffile	2020.10.1	Read and write image data from and to TIFF files. / BSD 3-Clause
tk	8.6.10	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.11.1	A functional standard library for Python / BSD-3-Clause
tornado	6.0.4	A Python web framework and asynchronous networking library, originall
tqdm	4.50.2	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	5.0.5	Configuration system for Python applications / BSD-3-Clause
typing_extensions	3.7.4.3	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	4.0.1	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.9	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.11	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	0.10.3	Filesystem events monitoring / Apache 2.0
wcwidth	0.2.5	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.1	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.35.1	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.1	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.3.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.5	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.2.5	A C library for parsing and emitting YAML / MIT
yapf	0.30.0	A formatter for Python files / Apache 2.0
zeromq	4.3.3	A high-performance asynchronous messaging library. / LGPL 3
zict	2.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	3.4.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.5.0	Very basic event publishing system / Zope Public License
zope.interface	5.1.2	Interfaces for Python / ZPL-2.1
zstd	1.4.5	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.02 (Mar 11, 2020)

User-facing changes

- Name changed to Anaconda Individual Edition.
- The previous 2019.10 release was the last for Python 2.7, and Python 2 will not be supported going forward.
- Python 3.6, 3.7 and 3.8 meta-packages available, installer is Python 3.7.
- Last official release to support Windows 7.
- Updated links to in GUI installer.
- Anaconda Navigator updated to 1.9.12.

Backend improvements (non-visible changes)

- Deadlock fixes on single core computers.
- Improved menu removal on Windows.

Major package updates

- anaconda-project 0.8.3 -> 0.8.4
- bokeh 1.3.4 -> 1.4.0
- dask 2.5.2 -> 2.11.0
- ipython 7.8.0 -> 7.12.0
- jupyter_client 5.3.3 -> 5.3.4
- jupyter_console 6.0.0 -> 6.1.0
- jupyter_core 4.5.0 -> 4.6.1
- jupyterlab 1.1.4 -> 1.2.6
- matplotlib 3.1.1 -> 3.1.3
- pandas 0.25.1 -> 1.0.1
- pillow 6.2.0 -> 7.0.0
- python 3.7.4 -> 3.7.6
- scikit-image 0.15.0 -> 0.16.2
- scipy 1.3.1 -> 1.4.1
- seaborn 0.9.0 -> 0.10.0
- spyder 3.3.6 -> 4.0.1
- spyder-kernels 0.5.2 -> 1.8.1
- statsmodels 0.10.1 -> 0.11.0
- sympy 1.4 -> 1.5.1

Packages

Anaconda 2020.02 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
asn1crypto	1.3.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.3.3	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0	Community-developed Python Library for Astronomy / BSD-3-Cla
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.4.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.1.7	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.8.2	Python library designed for screen-scraping / MIT
bitarray	1.2.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.4.0	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.1.1	Certificates for use with other packages. / MPL 2.0
certifi	2019.11.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.3.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.3	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.8.3	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.11	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.8	Provides cryptographic recipes and primitives to Python developers
curl	7.68.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.15	The Cython compiler for writing C extensions for the Python langu

Table 82 – continued from prev

Name	Version	Summary / License
cytoolz	0.10.1	Cython implementation of Toolz. High performance functional util
dask	2.11.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.11.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.1	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20181111	Diff Match Patch is a high-performance library in multiple languag
distributed	2.11.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.7.9	Your Tool For Style Guide Enforcement / MIT
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only an
fsspec	0.6.2	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / L
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.1	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	1.7.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	1.5.0	A library to access the metadata for a Python package / Apache-2.0
intel-openmp	2020.0	Math library for Intel and compatible processors / proprietary - Inte
intervaltree	3.0.2	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.1.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.12.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.14.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.1	An easy to use stand-alone template engine written in pure python.
joblib	0.14.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.1	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.4	jupyter_client contains the reference implementation of the Jupyter

Table 82 – continued from prev

Name	Version	Summary / License
jupyter_console	6.1.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	1.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like app
keyring	21.1.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.17.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.68.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libllvm9	9.0.1	Development headers and libraries for LLVM / LLVM-Exception
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.31.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.5.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.3	Publication quality figures in Python / PSF-based
matplotlib-base	3.1.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.15	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.1	A library for testing in Python / BSD-2-Clause
more-itertools	8.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-poi
mpir	3.0.0	Multiple Precision Integers and Rationals. / LGPL 3
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.1	Converting Jupyter Notebooks / BSD-3-Clause

Table 82 – continued from prev

Name	Version	Summary / License
nbformat	5.0.4	The reference implementation of the Jupyter Notebook format / BS
networkx	2.4	Python package for creating and manipulating complex networks /
nltk	3.4.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.3	Jupyter Notebook / BSD-3-Clause
numba	0.48.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.18.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.18.1	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.2	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.0.1	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.1	SSH2 protocol library / LGPL 2.1
parso	0.5.2	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	13.1.0	A module wrapper for os.path / MIT
path.py	12.4.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas /
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	7.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.0.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.5	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.3	Library for building powerful interactive command lines in Python
psutil	5.6.7	A cross-platform process and system utilities module for Python /
py	1.8.1	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.5	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	4.0.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.5.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.4.4	python code static checker / GPL-2.0-only
pynacl	1.3.0	PyNaCl is a Python binding to the Networking and Cryptography li

Table 82 – continued from prev

Name	Version	Summary / License
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.6	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.7	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.3.5	Simple and powerful testing with Python. / MIT
python	3.7.6	General purpose programming language / PSF
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.3.4	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.31.7	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3	YAML parser and emitter for Python / MIT
pyzmq	18.1.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.6.0	Jupyter Qt Console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.6.8	Alternative regular expression module, to replace re / Python-2.0
requests	2.22.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.16.0	A python refactoring library / GPL 2.0
rtree	0.9.3	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.22.1	A set of python modules for machine learning and data mining / BS
scipy	1.4.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.10.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	45.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.14.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.5	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp

Table 82 – continued from prev

Name	Version	Summary / License
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.0.1	The Scientific Python Development Environment / MIT
spyder-kernels	1.8.1	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.13	Database Abstraction Library. / MIT
sqlite	3.31.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.11.0	Statistical computations and models for use with SciPy / BSD-3-Cla
sympy	1.5.1	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.0	High level abstract threading library / Apache 2.0
tblib	1.6.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.3	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.42.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.1	a fork of Python 2 and 3 ast modules with type comment support / A
typing_extensions	3.7.4.2	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	1.35	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.25.8	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.2	Filesystem events monitoring / Apache 2.0
wcwidth	0.1.8	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.34.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.2.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.17.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
yapf	0.28.0	A formatter for Python files / Apache 2.0
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	2.2.0	A pathlib-compatible Zipfile object wrapper / MIT

Table 82 – continued from prev

Name	Version	Summary / License
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.4	Very basic event publishing system / Zope Public License
zope.interface	4.7.1	Interfaces for Python / ZPL 2.1
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.02 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science proje
argh	0.26.2	The Natural CLI. / LGPL 3
asn1crypto	1.3.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.3.3	A abstract syntax tree for Python with inference support. / LGPL-2
astropy	4.0	Community-developed Python Library for Astronomy / BSD-3-Cla
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.3.0	attrs is the Python package that will bring back the joy of writing cl
autopep8	1.4.4	A tool that automatically formats Python code to conform to the PE
babel	2.8.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
bcrypt	3.1.7	Modern password hashing for your software and your servers / Apa
beautifulsoup4	4.8.2	Python library designed for screen-scraping / MIT
bitarray	1.2.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.4.0	Statistical and novel interactive HTML plots for Python / BSD-3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.1.1	Certificates for use with other packages. / MPL 2.0
certifi	2019.11.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.3.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.3	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.8.3	OS-agnostic, system-level binary package and environment manage

Table 83 – continued from prev

Name	Version	Summary / License
conda-build	3.18.11	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.8	Provides cryptographic recipes and primitives to Python developers
curl	7.68.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.15	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.1	Cython implementation of Toolz. High performance functional util
dask	2.11.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.11.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.1	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20181111	Diff Match Patch is a high-performance library in multiple languag
distributed	2.11.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.7.9	Your Tool For Style Guide Enforcement / MIT
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and
fsspec	0.6.2	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / L
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.1	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	1.6.1	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	1.5.0	A library to access the metadata for a Python package / Apache-2.0
intel-openmp	2020.0	Math library for Intel and compatible processors / proprietary - Inte
intervaltree	3.0.2	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.1.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.12.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS

Table 83 – continued from prev

Name	Version	Summary / License
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.14.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.11.1	An easy to use stand-alone template engine written in pure python.
joblib	0.14.1	Lightweight pipelining: using Python functions as pipeline jobs. / B
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.9.1	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.4	jupyter_client contains the reference implementation of the Jupyter
jupyter_console	6.1.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	1.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like app
keyring	21.1.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	An efficient C++ implementation of the Cassowary constraint solve
krb5	1.17.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.68.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libllvm9	9.0.1	Development headers and libraries for LLVM / LLVM-Exception
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.8.5	Extensible framework for robust spatial indexing / MIT
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.31.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.5.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-C
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.3	Publication quality figures in Python / PSF-based
matplotlib-base	3.1.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.15	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common proba
mock	4.0.1	A library for testing in Python / BSD-2-Clause

Table 83 – continued from prev

Name	Version	Summary / License
more-itertools	8.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily l
mpfr	4.0.2	The MPFR library is a C library for multiple-precision floating-poi
mpir	3.0.0	Multiple Precision Integers and Rationals. / LGPL 3
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer / Apache-2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.4	The reference implementation of the Jupyter Notebook format / BS
networkx	2.4	Python package for creating and manipulating complex networks /
nltk	3.4.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.3	Jupyter Notebook / BSD-3-Clause
numba	0.48.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.18.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.18.1	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.2	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	20.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.0.1	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
paramiko	2.7.1	SSH2 protocol library / LGPL 2.1
parso	0.5.2	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	13.1.0	A module wrapper for os.path / MIT
path.py	12.4.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas /
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	7.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / Lic
pip	20.0.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.5	Library for building powerful interactive command lines in Python
prompt_toolkit	3.0.3	Library for building powerful interactive command lines in Python
psutil	5.6.7	A cross-platform process and system utilities module for Python / B
py	1.8.1	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT

Table 83 – continued from prev

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.5	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	4.0.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.5.2	Pygments is a generic syntax highlighter suitable for use in code ho
pylint	2.4.4	python code static checker / GPL-2.0-only
pynacl	1.3.0	PyNaCl is a Python binding to the Networking and Cryptography li
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.6	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.7	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.3.5	Simple and powerful testing with Python. / MIT
python	3.7.6	General purpose programming language / PSF
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Claus
python-jsonrpc-server	0.3.4	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0
python-language-server	0.31.7	An implementation of the Language Server Protocol for Python / M
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pywin32	227	Python extensions for Windows / PSF
pywin32-ctypes	0.2.0	A limited subset of pywin32 re-implemented using ctypes (or cffi) /
pywinpty	0.5.7	Python bindings for the winpty library / MIT
pyyaml	5.3	YAML parser and emitter for Python / MIT
pyzmq	18.1.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQ
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.6.0	Jupyter Qt Console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
regex	2020.6.8	Alternative regular expression module, to replace re / Python-2.0
requests	2.22.0	Requests is an elegant and simple HTTP library for Python, built w
rope	0.16.0	A python refactoring library / GPL 2.0
rtree	0.9.3	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.1	A set of python modules for machine learning and data mining / BS
scipy	1.4.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.10.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	45.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.14.0	Python 2 and 3 compatibility utilities / MIT

Table 83 – continued from prev

Name	Version	Summary / License
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.5	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.2.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.0.1	The Scientific Python Development Environment / MIT
spyder-kernels	1.8.1	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.13	Database Abstraction Library. / MIT
sqlite	3.31.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.11.0	Statistical computations and models for use with SciPy / BSD-3-Cl
sympy	1.5.1	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.0	High level abstract threading library / Apache 2.0
tblib	1.6.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.3	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with file
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.42.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.1	a fork of Python 2 and 3 ast modules with type comment support /
typing_extensions	3.7.4.2	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	1.35	Ultra fast JSON decoder and encoder written in C with Python bind
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.25.8	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
watchdog	0.10.2	Filesystem events monitoring / Apache 2.0
wcwidth	0.1.8	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.34.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr

Table 83 – continued from prev

Name	Version	Summary / License
xlsxwriter	1.2.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.17.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
yapf	0.28.0	A formatter for Python files / Apache 2.0
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	2.2.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.event	4.4	Very basic event publishing system / Zope Public License
zope.interface	4.7.1	Interfaces for Python / ZPL 2.1
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.02 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
applaunchservices	0.2.1	Simple package for registering an app with apple Launch Services to han
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python. / Public Domain
argh	0.26.2	The Natural CLI. / LGPL 3
asn1crypto	1.3.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.3	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.4.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.8.2	Python library designed for screen-scraping / MIT
bitarray	1.2.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.4.0	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT

Table 84 – continued from previou

Name	Version	Summary / License
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.1.1	Certificates for use with other packages. / MPL 2.0
certifi	2019.11.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.3.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.3	Cross-platform colored terminal text / BSD-3-Clause
conda	4.8.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.11	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.15	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.1	Cython implementation of Toolz. High performance functional utilities /
dask	2.11.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.11.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.12	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.1	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20181111	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.11.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.7.9	Your Tool For Style Guide Enforcement / MIT
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.6.2	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.63.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT

Table 84 – continued from previou

Name	Version	Summary / License
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.1	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	1.7.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	1.5.0	A library to access the metadata for a Python package / Apache-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
intervaltree	3.0.2	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.1.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.12.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.14.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.11.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.14.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.1	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.4	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.1.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	1.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.1.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.17.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
libarchive	3.3.3	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	LLVM C++ standard library / Apache-2.0 WITH LLVM-exception
libedit	3.1.20181209	Editline Library (libedit) / BSD-2-Clause
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm9	9.0.1	Development headers and libraries for LLVM / LLVM-Exception
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.9.0	the SSH library / BSD-3-Clause
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	4.0.1	The OpenMP API supports multi-platform shared-memory parallel progr
llvmlite	0.31.0	A lightweight LLVM python binding for writing JIT compilers / New BS

Table 84 – continued from previou

Name	Version	Summary / License
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.5.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.3	Publication quality figures in Python / PSF-based
matplotlib-base	3.1.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.15	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability
mock	4.0.1	A library for testing in Python / BSD-2-Clause
more-itertools	8.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.4	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.4	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.3	Jupyter Notebook / BSD-3-Clause
numba	0.48.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.2	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.0.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.2	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path	13.1.0	A module wrapper for os.path / MIT
path.py	12.4.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT

Table 84 – continued from previou

Name	Version	Summary / License
pillow	7.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.0.2	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.5	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.3	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.1	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.5	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	4.0.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.5.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.4.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.6	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.7	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.3.5	Simple and powerful testing with Python. / MIT
python	3.7.6	General purpose programming language / PSF
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.3.4	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.31.7	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3	YAML parser and emitter for Python / MIT
pyzmq	18.1.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.6.0	Jupyter Qt Console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.6.8	Alternative regular expression module, to replace re / Python-2.0
requests	2.22.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	11.0.2	
rope	0.16.0	A python refactoring library / GPL 2.0
rtree	0.9.3	R-Tree spatial index for Python GIS / MIT

Table 84 – continued from previou

Name	Version	Summary / License
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.22.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.4.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.10.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	46.0.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.14.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.5	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help b
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.2.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.0.1	The Scientific Python Development Environment / MIT
spyder-kernels	1.8.1	Jupyter kernels for Spyder's console / MIT
sqlalchemy	1.3.13	Database Abstraction Library. / MIT
sqlite	3.31.1	Implements a self-contained, zero-configuration, SQL database engine / P
statsmodels	0.11.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.5.1	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.0	High level abstract threading library / Apache 2.0
tblib	1.6.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.3	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.42.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.1	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.2	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	1.35	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.8	HTTP library with thread-safe connection pooling, file post, and more. / M
watchdog	0.10.2	Filesystem events monitoring / Apache 2.0
wcwidth	0.1.8	Measures number of Terminal column cells of wide-character codes. / M

Table 84 – continued from previou

Name	Version	Summary / License
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.34.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.0	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwings	0.17.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
yapf	0.28.0	A formatter for Python files / Apache 2.0
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	2.2.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.4	Very basic event publishing system / Zope Public License
zope.interface	4.7.1	Interfaces for Python / ZPL 2.1
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.02 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	1.3.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.3	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0	Community-developed Python Library for Astronomy / BSD-3-Clause
attrs	19.3.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.8.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.8.2	Python library designed for screen-scraping / MIT
bitarray	1.2.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.4.0	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT

Table 85 – continued from previou

Name	Version	Summary / License
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.1.1	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.11.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.3.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.3	Cross-platform colored terminal text / BSD-3-Clause
conda	4.8.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.11	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.15	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.1	Cython implementation of Toolz. High performance functional utilities /
dask	2.11.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.11.0	Parallel Python with task scheduling / BSD-3-Clause
decorator	4.4.1	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.11.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fsspec	0.6.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.63.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 85 – continued from previou

Name	Version	Summary / License
imageio	2.6.1	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	1.7.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	1.5.0	A library to access the metadata for a Python package / Apache-2.0
ipykernel	5.1.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.12.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.16.0	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.11.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.14.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.4	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.1.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
kiwisolver	1.1.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.17.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-ppc64le	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.3.3	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / BSD-2-Clause
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
libopenblas	0.3.6	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.5.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.3	Publication quality figures in Python / PSF-based
matplotlib-base	3.1.3	Publication quality figures in Python / PSF-based

Table 85 – continued from previou

Name	Version	Summary / License
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mock	4.0.1	A library for testing in Python / BSD-2-Clause
more-itertools	8.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.4	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.4	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Natural Language Toolkit / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.3	Jupyter Notebook / BSD-3-Clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.2	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.6	An optimized BLAS library / BSD
openblas-devel	0.3.6	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.0.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.6.1	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.10	A small utility to modify the dynamic linker and RPATH of ELF executab
path	13.1.0	A module wrapper for os.path / MIT
path.py	12.4.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	7.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.0.2	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.5	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.3	Library for building powerful interactive command lines in Python / BSD

Table 85 – continued from previou

Name	Version	Summary / License
psutil	5.6.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.1	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.10.1	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.5	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.5.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.4.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.6	Create and execute simple grammars / MIT
pyrsistent	0.15.7	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.3.5	Simple and powerful testing with Python. / MIT
python	3.7.6	General purpose programming language / PSF
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.3	YAML parser and emitter for Python / MIT
pyzmq	18.1.1	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.6.8	Alternative regular expression module, to replace re / Python-2.0
requests	2.22.0	Requests is an elegant and simple HTTP library for Python, built with . /
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.22.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.4.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.10.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	45.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.14.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.5	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A

Table 85 – continued from previou

Name	Version	Summary / License
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
sphinxcontrib-websupport	1.2.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.13	Database Abstraction Library. / MIT
sqlite	3.31.1	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.11.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.5.1	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.6.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.3	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.42.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.1	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.2	Backported and Experimental Type Hints for Python / PSF-2.0
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.8	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.8	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.34.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	2.2.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.4	Very basic event publishing system / Zope Public License
zope.interface	4.7.1	Interfaces for Python / ZPL 2.1
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2020.02 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.4	Tool for encapsulating, running, and reproducing data science projects / B
argh	0.26.2	The Natural CLI. / LGPL 3
asn1crypto	1.3.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.3	A abstract syntax tree for Python with inference support. / LGPL-2.1-onl
astropy	4.0	Community-developed Python Library for Astronomy / BSD-3-Clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.3.0	attrs is the Python package that will bring back the joy of writing classes
autopep8	1.4.4	A tool that automatically formats Python code to conform to the PEP 8 st
babel	2.8.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.8.2	Python library designed for screen-scraping / MIT
bitarray	1.2.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.4.0	Statistical and novel interactive HTML plots for Python / BSD-3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.3.2	Fast NumPy array functions written in Cython. / BSD 2-Clause
brotlipy	0.7.0	Python bindings to the Brotli compression library / MIT
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2020.1.1	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.11.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.14.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.3.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.3	Cross-platform colored terminal text / BSD-3-Clause
conda	4.8.3	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.11	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0.post1	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.8	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.15	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.1	Cython implementation of Toolz. High performance functional utilities /
dask	2.11.0	Parallel PyData with Task Scheduling / BSD-3-Clause
dask-core	2.11.0	Parallel Python with task scheduling / BSD-3-Clause
dbus	1.13.12	Simple message bus system for applications to talk to one another / GPL2

Table 86 – continued from previou

Name	Version	Summary / License
decorator	4.4.1	Better living through Python with decorators. / BSD-3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
diff-match-patch	20181111	Diff Match Patch is a high-performance library in multiple languages that
distributed	2.11.0	Distributed computing with Dask / BSD-3-Clause
docutils	0.16	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flake8	3.7.9	Your Tool For Style Guide Enforcement / MIT
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0-only and Lice
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.6.2	A specification for pythonic filesystems / BSD-3-Clause
future	0.18.2	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.63.1	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.10.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.1	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.2.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib-metadata	1.7.0	A library to access the metadata for a Python package / Apache-2.0
importlib_metadata	1.5.0	A library to access the metadata for a Python package / Apache-2.0
intel-openmp	2020.0	Math library for Intel and compatible processors / proprietary - Intel
intervaltree	3.0.2	Editable interval tree data structure for Python 2 and 3 / Apache-2.0
ipykernel	5.1.4	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.12.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.14.1	An autocompletion tool for Python that can be used for text editors. / MIT
jeepney	0.4.2	Pure Python DBus interface / MIT

Table 86 – continued from previou

Name	Version	Summary / License
jinja2	2.11.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.14.1	Lightweight pipelining: using Python functions as pipeline jobs. / BSD-3
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.9.1	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.2.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.4	jupyter_client contains the reference implementation of the Jupyter protoc
jupyter_console	6.1.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.6.1	Core common functionality of Jupyter projects. / BSD-3-Clause
jupyterlab	1.2.6	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	21.1.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	An efficient C++ implementation of the Cassowary constraint solver / BS
krb5	1.17.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.3	A fast and thorough lazy object proxy / BSD-2-Clause
lcms2	2.11	Open Source Color Management Engine / MIT
ld_impl_linux-64	2.33.1	A set of programming tools for creating and managing binary programs,
libarchive	3.3.3	Multi-format archive and compression library / BSD-2-Clause
libcurl	7.68.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / BSD-2-Clause
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libllvm9	9.0.1	Development headers and libraries for LLVM / LLVM-Exception
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libspatialindex	1.9.3	Extensible framework for robust spatial indexing / MIT
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.1.0	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.31.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.5.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD-3-Clause
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD-2-Clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.3	Publication quality figures in Python / PSF-based
matplotlib-base	3.1.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2020.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.15	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability

Table 86 – continued from previou

Name	Version	Summary / License
mock	4.0.1	A library for testing in Python / BSD-2-Clause
more-itertools	8.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer / Apache-2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	5.0.4	The reference implementation of the Jupyter Notebook format / BSD-3-C
ncurses	6.2	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.4	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Natural Language Toolkit / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.3	Jupyter Notebook / BSD-3-Clause
numba	0.48.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.1	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.18.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.2	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	20.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	1.0.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries) / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.5.2	A Python Parser / MIT
partd	1.1.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.10	A small utility to modify the dynamic linker and RPATH of ELF executab
path	13.1.0	A module wrapper for os.path / MIT
path.py	12.4.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
pathtools	0.1.2	Path utilities for Python. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.8.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	7.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / LicenseR
pip	20.0.2	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache-2.0
prompt-toolkit	3.0.5	Library for building powerful interactive command lines in Python / BSD
prompt_toolkit	3.0.3	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC

Table 86 – continued from previou

Name	Version	Summary / License
py	1.8.1	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.5	A Python Interface To The cURL library / LGPL, MIT
pydocstyle	4.0.1	Python docstring style checker (formerly pep257) / MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.5.2	Pygments is a generic syntax highlighter suitable for use in code hosting,
pylint	2.4.4	python code static checker / GPL-2.0-only
pyodbc	4.0.30	DB API Module for ODBC / MIT
pyopenssl	19.1.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.6	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.7	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.6.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.3.5	Simple and powerful testing with Python. / MIT
python	3.7.6	General purpose programming language / PSF
python-dateutil	2.8.1	Extensions to the standard Python datetime module. / BSD 3 Clause
python-jsonrpc-server	0.3.4	A Python 2.7 and 3.4+ server implementation of the JSON RPC 2.0 proto
python-language-server	0.31.7	An implementation of the Language Server Protocol for Python / MIT
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.1.1	Discrete Wavelet Transforms in Python / MIT
pyxdg	0.26	PyXDG contains implementations of freedesktop.org standards in python
pyyaml	5.3	YAML parser and emitter for Python / MIT
pyzmq	18.1.1	Python bindings for zeromq / BSD 3-clause
qdarkstyle	2.8	A dark stylesheet for Qt applications (Qt4, Qt5, PySide, PyQt4, PyQt5, Q
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.1	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.6.0	Jupyter Qt Console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
regex	2020.6.8	Alternative regular expression module, to replace re / Python-2.0
requests	2.22.0	Requests is an elegant and simple HTTP library for Python, built with . /
ripgrep	11.0.2	
rope	0.16.0	A python refactoring library / GPL 2.0
rtree	0.9.3	R-Tree spatial index for Python GIS / MIT
ruamel_yaml	0.15.87	A patched copy of ruamel.yaml. / MIT
scikit-image	0.16.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.22.1	A set of python modules for machine learning and data mining / BSD-3-C
scipy	1.4.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.10.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.2	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	45.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT

Table 86 – continued from previou

Name	Version	Summary / License
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.14.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	1.9.5	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.4.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
sphinxcontrib-websupport	1.2.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	4.0.1	The Scientific Python Development Environment / MIT
spyder-kernels	1.8.1	Jupyter kernels for Spyder’s console / MIT
sqlalchemy	1.3.13	Database Abstraction Library. / MIT
sqlite	3.31.1	Implements a self-contained, zero-configuration, SQL database engine /
statsmodels	0.11.0	Statistical computations and models for use with SciPy / BSD-3-Clause
sympy	1.5.1	Python library for symbolic mathematics / BSD-3-Clause
tbb	2020.0	High level abstract threading library / Apache 2.0
tblib	1.6.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.3	Terminals served by tornado websockets / BSD-2-Clause
testpath	0.4.4	Testpath is a collection of utilities for Python code working with files and
threadpoolctl	2.1.0	Python helpers to control the threadpools of native libraries / BSD 3-Clau
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toml	0.10.1	Python lib for TOML. / MIT
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.42.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typed-ast	1.4.1	a fork of Python 2 and 3 ast modules with type comment support / Apach
typing_extensions	3.7.4.2	Backported and Experimental Type Hints for Python / PSF-2.0
ujson	1.35	Ultra fast JSON decoder and encoder written in C with Python bindings /
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.25.8	HTTP library with thread-safe connection pooling, file post, and more. /
watchdog	0.10.2	Filesystem events monitoring / Apache 2.0
wcwidth	0.1.8	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	1.0.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.34.2	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	2.0.0	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.7	A Python module for creating Excel XLSX files / BSD-2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD

Table 86 – continued from previou

Name	Version	Summary / License
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML / MIT
yapf	0.28.0	A formatter for Python files / Apache 2.0
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	2.2.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.event	4.4	Very basic event publishing system / Zope Public License
zope.interface	4.7.1	Interfaces for Python / ZPL 2.1
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 (Oct 15, 2019)

User-facing changes

- Updated packages.
- For macOS Catalina, we have notarized the package installers and changed the default install directory to /opt/anaconda{2,3}.

Backend improvements (non-visible changes)

- Added a new Cython-based Python wrapper to clear up library loading problems with libarchive.
- Extraction scripts work better with older operating systems.

Major package updates

- dask 2.1.0 -> 2.5.2
- ipython 7.6.1 -> 7.8.0
- jupyter_client 5.3.1 -> 5.3.3
- jupyterlab 1.0.2 -> 1.1.4
- jupyterlab_server 1.0.0 -> 1.0.6
- matplotlib 3.1.0 -> 3.1.1
- pandas 0.24.2 -> 0.25.1
- pillow 6.1.0 -> 6.2.0
- python 3.7.3 -> 3.7.4
- spyder-kernels 0.5.1 -> 0.5.2
- statsmodels 0.10.0 -> 0.10.1

Packages

Anaconda 2019.10 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.3.1	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD 3-clau
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	2.5.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.5.2	Parallel Python with task scheduling / BSD 3-Clause

Table 87 – continued from prev

Name	Version	Summary / License
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.5.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
fsspec	0.5.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python.
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.8.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.1.4	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like app
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause

Table 87 – continued from prev

Name	Version	Summary / License
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.1	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common proba
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.2.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.3	Python package for creating and manipulating complex networks / B
nltk	3.4.5	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.1	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.0	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.25.1	High-performance, easy-to-use data structures and data analysis too

Table 87 – continued from prev

Name	Version	Summary / License
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.10	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.4.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.2.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.4.0	Pytest plugin with advanced doctest features / BSD 3-Clause
pytest-openfiles	0.4.0	Pytest plugin for detecting inadvertent open file handles / BSD-3-C
pytest-remotedata	0.3.2	Pytest plugin for controlling remote data access / BSD
python	3.7.4	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT

Table 87 – continued from prev

Name	Version	Summary / License
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.3	A set of python modules for machine learning and data mining / BS
scipy	1.3.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.4	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built

Table 87 – continued from prev

Name	Version	Summary / License
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character code
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.3.1	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD 3-clau
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be

Table 88 – continued from prev

Name	Version	Summary / License
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	2.5.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.5.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.5.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
fsspec	0.5.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT

Table 88 – continued from prev

Name	Version	Summary / License
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python.
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.8.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.1.4	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like appl
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.1	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause

Table 88 – continued from prev

Name	Version	Summary / License
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common proba
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.2.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.3	Python package for creating and manipulating complex networks /
nltk	3.4.5	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.1	Jupyter Notebook / BSD 3-clause
numba	0.45.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.0	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.25.1	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.10	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain

Table 88 – continued from prev

Name	Version	Summary / License
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.4.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.2.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.4.0	Pytest plugin with advanced doctest features / BSD 3-Clause
pytest-openfiles	0.4.0	Pytest plugin for detecting inadvertent open file handles / BSD-3-C
pytest-remotedata	0.3.2	Pytest plugin for controlling remote data access / BSD
python	3.7.4	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.1	A set of python modules for machine learning and data mining / BS
scipy	1.3.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful

Table 88 – continued from prev

Name	Version	Summary / License
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.4	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.2.2	Community-developed Python Library for Astronomy / BSD 3-clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.5.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.5.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0

Table 89 – continued from previou

Name	Version	Summary / License
distributed	2.5.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fsspec	0.5.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.8.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.1.4	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause

Table 89 – continued from previou

Name	Version	Summary / License
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	4.0.1	Support for the OpenMP language / MIT license or UIUC License
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.1	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.1	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause

Table 89 – continued from previou

Name	Version	Summary / License
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.0	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.25.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.10	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.4.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.2.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.4.0	Pytest plugin with advanced doctest features / BSD 3-Clause
pytest-openfiles	0.4.0	Pytest plugin for detecting inadvertent open file handles / BSD-3-Clause
pytest-remotedata	0.3.2	Pytest plugin for controlling remote data access / BSD
python	3.7.4	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause

Table 89 – continued from previou

Name	Version	Summary / License
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ripgrep	0.10.0	
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.3.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.8	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T

Table 89 – continued from previou

Name	Version	Summary / License
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.3	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.2.2	Community-developed Python Library for Astronomy / BSD 3-clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF

Table 90 – continued from previou

Name	Version	Summary / License
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.5.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.5.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.5.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fsspec	0.5.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause

Table 90 – continued from previou

Name	Version	Summary / License
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
ipykernel	5.1.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libopenblas	0.3.6	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.1	Publication quality figures in Python / PSF-based

Table 90 – continued from previou

Name	Version	Summary / License
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	7.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nomkl	3.0	None / BSD
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.1	Jupyter Notebook / BSD 3-clause
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.3.6	An Optimized BLAS library / BSD
openblas-devel	0.3.6	OpenBLAS headers and libraries for developing software that used Open
openpyxl	3.0.0	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.25.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.10	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT

Table 90 – continued from previou

Name	Version	Summary / License
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.4.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.2.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.4.0	Pytest plugin with advanced doctest features / BSD 3-Clause
pytest-openfiles	0.4.0	Pytest plugin for detecting inadvertent open file handles / BSD-3-Clause
pytest-remotedata	0.3.2	Pytest plugin for controlling remote data access / BSD
python	3.7.4	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.3.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A

Table 90 – continued from previou

Name	Version	Summary / License
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.3.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.2.2	Community-developed Python Library for Astronomy / BSD 3-clause

Table 91 – continued from previou

Name	Version	Summary / License
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.5.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.5.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.5.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT

Table 91 – continued from previou

Name	Version	Summary / License
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
fsspec	0.5.2	A specification for pythonic filesystems / BSD-3-Clause
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.2	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.4.1	Pure Python DBus interface / MIT
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.8.5	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.1.4	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.6	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause

Table 91 – continued from previou

Name	Version	Summary / License
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.1	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.2.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.1	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.17.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	3.0.0	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT

Table 91 – continued from previou

Name	Version	Summary / License
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.25.1	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.10	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.4.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.2.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.4.0	Pytest plugin with advanced doctest features / BSD 3-Clause
pytest-openfiles	0.4.0	Pytest plugin for detecting inadvertent open file handles / BSD-3-Clause
pytest-remotedata	0.3.2	Pytest plugin for controlling remote data access / BSD
python	3.7.4	General purpose programming language / PSF

Table 91 – continued from previou

Name	Version	Summary / License
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ripgrep	0.10.0	
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.3.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.2.0	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript /
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.4	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and

Table 91 – continued from previou

Name	Version	Summary / License
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.3	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD 3-clau
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT

Table 92 – continued from prev

Name	Version	Summary / License
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	4.0.2	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT

Table 92 – continued from prev

Name	Version	Summary / License
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause

Table 92 – continued from prev

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Inte
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4.5	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2t	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas /
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause

Table 92 – continued from prev

Name	Version	Summary / License
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause

Table 92 – continued from prev

Name	Version	Summary / License
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typing	3.7.4.1	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT

Table 92 – continued from prev

Name	Version	Summary / License
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD 3-clau
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus

Table 93 – continued from prev

Name	Version	Summary / License
configparser	4.0.2	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Claus
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors.

Table 93 – continued from prev

Name	Version	Summary / License
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	/
m2w64-gcc-libs	5.3.0	/
m2w64-gcc-libs-core	5.3.0	/
m2w64-gmp	6.1.0	/
m2w64-libwinpthread-git	5.0.0.4634.697f757	/
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Inte
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	/
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /

Table 93 – continued from prev

Name	Version	Summary / License
nltk	3.4.5	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.45.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.4	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2t	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.2	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF

Table 93 – continued from prev

Name	Version	Summary / License
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0

Table 93 – continued from prev

Name	Version	Summary / License
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typing	3.7.4.1	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode string
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	
vs2015_runtime	14.16.27012	MSVC runtimes associated with cl.exe version 19.16.27032.1 (VS 2
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD 3-clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD

Table 94 – continued from previou

Name	Version	Summary / License
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	4.0.2	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A

Table 94 – continued from previou

Name	Version	Summary / License
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD

Table 94 – continued from previou

Name	Version	Summary / License
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause

Table 94 – continued from previou

Name	Version	Summary / License
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
portaudio	19.6.0	A cross platform, open-source, audio I/O library / MIT
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyaudio	0.2.11	Bindings for PortAudio v19, the cross-platform audio stream library / MI
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Table 94 – continued from previou

Name	Version	Summary / License
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ripgrep	0.10.0	
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.8	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typing	3.7.4.1	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause

Table 94 – continued from previou

Name	Version	Summary / License
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.3	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.10	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD 3-clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0

Table 95 – continued from previou

Name	Version	Summary / License
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	4.0.2	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause

Table 95 – continued from previou

Name	Version	Summary / License
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 95 – continued from previou

Name	Version	Summary / License
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	OpenBLAS headers and libraries for developing software that used Open
openpyxl	2.6.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.18.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT

Table 95 – continued from previou

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause

Table 95 – continued from previou

Name	Version	Summary / License
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typing	3.7.4.1	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.10 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	1.0.1	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD 3-clause
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found

Table 96 – continued from previou

Name	Version	Summary / License
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.8.0	Python library designed for screen-scraping / MIT
bitarray	1.0.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.3.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.8.28	Certificates for use with other packages. / MPL 2.0
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.9.11	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	4.0.2	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.6.0	Backports and enhancements for the contextlib module / PSF 2
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.13	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.15.2	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP

Table 96 – continued from previou

Name	Version	Summary / License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.1	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.6.0	A Python library for reading and writing image data / BSD-2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.23	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.15.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.3	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.2	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.2	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.3	tool and library for transferring data with URL syntax / MIT/X derivate (

Table 96 – continued from previou

Name	Version	Summary / License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.4.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.3.0	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.14	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.1.0	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.6.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.45.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.7.0	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT

Table 96 – continued from previou

Name	Version	Summary / License
openssl	1.1.1d	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.2	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.5.1	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.5	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.2.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.13.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycairo	1.18.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL 2
pyodbc	4.0.27	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.2	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.15.4	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.1	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.3	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT

Table 96 – continued from previou

Name	Version	Summary / License
pyyaml	5.1.2	YAML parser and emitter for Python / MIT
pyzmq	18.1.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.6.0	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.5	Jupyter Qt console / BSD 3-Clause
qtpy	1.9.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ripgrep	0.10.0	
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	2.0.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.9.3	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.9	Database Abstraction Library. / MIT
sqlite	3.30.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.1	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x A
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tbb	2019.4	High level abstract threading library / Apache 2.0
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.36.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.3	Configuration system for Python applications / BSD-3-Clause
typing	3.7.4.1	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS

Table 96 – continued from previou

Name	Version	Summary / License
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.16.0	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.6	A built-package format for Python. / MIT
widgetsnbextension	3.5.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.3	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.2.1	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.6.0	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 (Jul 24, 2019)

User-facing changes

- Conda install times have decreased by more than half for large packages.
- Conda 4.7.10 improves environment management and error messages.
- Conda constructor now supports building installers with the new .conda file format as well as noarch packages.
- Documentation has been updated for our integration with PyCharm, including more tutorials and improved navigation for easier use.
- Updated packages, including R packages and ML/AI packages.

Backend improvements (non-visible changes)

- Conda is moving to a quarterly release cycle.
- Conda build 3.18 works with the new .conda file format.

Major package updates

- anaconda-project 0.8.2 -> 0.8.3
- dask 1.1.4 -> 2.1.0
- ipython 7.4.0 -> 7.6.1
- jupyter_client 5.2.4 -> 5.3.1
- jupyter_core 4.4.0 -> 4.5.0
- jupyterlab 0.35.4 -> 1.0.2
- jupyterlab_server 0.2.0 -> 1.0.0
- matplotlib 3.0.3 -> 3.1.0
- mkl 2019.3 -> 2019.4
- numba 0.43.1 -> 0.45.0
- numpy 1.16.2 -> 1.16.4
- pillow 5.4.1 -> 6.1.0
- requests 2.21.0 -> 2.22.0
- scikit-image 0.14.2 -> 0.15.0
- spyder 3.3.3 -> 3.3.6
- spyder-kernels 0.4.2 -> 0.5.1
- statsmodels 0.9.0 -> 0.10.0

Packages

Anaconda 2019.07 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

Table 97 – continued from prev

Name	Version	Summary / License
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.10	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	2.1.0	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.1.0	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.1.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L

Table 97 – continued from prev

Name	Version	Summary / License
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.6.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python.
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.8.4	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.0.2	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.0	A set of server components for JupyterLab and JupyterLab like app
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 97 – continued from prev

Name	Version	Summary / License
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probai
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.3	Python package for creating and manipulating complex networks / I
nltk	3.4.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.0	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT

Table 97 – continued from prev

Name	Version	Summary / License
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.0.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.2	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted

Table 97 – continued from prev

Name	Version	Summary / License
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.1.2	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	MSVC runtimes associated with cl.exe version 19.15.26726 (VS 20
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.10	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	2.1.0	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.1.0	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.1.0	Distributed computing with Dask / BSD 3-Clause

Table 98 – continued from prev

Name	Version	Summary / License
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicts
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.6.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python.
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
json5	0.8.4	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.0.2	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.0	A set of server components for JupyterLab and JupyterLab like app
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.37	PNG reference library / zlib/libpng

Table 98 – continued from prev

Name	Version	Summary / License
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-C
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common proba
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.3	Python package for creating and manipulating complex networks / B
nltk	3.4.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.0	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause

Table 98 – continued from prev

Name	Version	Summary / License
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	5.0.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause

Table 98 – continued from prev

Name	Version	Summary / License
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.1	A set of python modules for machine learning and data mining / BS
scipy	1.3.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / I
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.1.2	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Cl
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaS
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp do
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, ori
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	MSVC runtimes associated with cl.exe version 19.15.26726 (VS 20
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT

Table 98 – continued from prev

Name	Version	Summary / License
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnir
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause

Table 99 – continued from previou

Name	Version	Summary / License
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.1.0	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.1.0	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.1.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0

Table 99 – continued from previou

Name	Version	Summary / License
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.6.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.8.4	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.0.2	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvm-openmp	4.0.1	Support for the OpenMP language / MIT license or UIUC License
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause

Table 99 – continued from previou

Name	Version	Summary / License
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.0	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach

Table 99 – continued from previou

Name	Version	Summary / License
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.0.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.3.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0

Table 99 – continued from previou

Name	Version	Summary / License
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.1.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs “serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.5	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.1.0	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.1.0	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	2.1.0	Distributed computing with Dask / BSD 3-Clause

Table 100 – continued from previo

Name	Version	Summary / License
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0
ipykernel	5.1.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.6.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL

Table 100 – continued from previo

Name	Version	Summary / License
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	7.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	6.0.0	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	OpenBLAS headers and libraries for developing software that used Open
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2

Table 100 – continued from previo

Name	Version	Summary / License
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.0.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo

Table 100 – continued from previo

Name	Version	Summary / License
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.1.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.2.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	None / BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	2.1.0	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	2.1.0	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0

Table 101 – continued from previo

Name	Version	Summary / License
distributed	2.1.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.1	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.6.1	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.4	Pure Python DBus interface / MIT
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
joblib	0.13.2	Python function as pipeline jobs. / BSD 3-Clause
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
json5	0.8.4	A Python implementation of the JSON5 data format / Apache-2.0
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause

Table 101 – continued from previo

Name	Version	Summary / License
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	1.0.2	JupyterLab / BSD-3-Clause
jupyterlab_server	1.0.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	7.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.3	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1

Table 101 – continued from previo

Name	Version	Summary / License
notebook	6.0.0	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	12.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock

Table 101 – continued from previo

Name	Version	Summary / License
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	5.0.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.15.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.21.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.3.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	2.1.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-applehelp	1.0.1	sphinxcontrib-applehelp is a sphinx extension which outputs Apple help t
sphinxcontrib-devhelp	1.0.1	sphinxcontrib-devhelp is a sphinx extension which outputs Devhelp docu
sphinxcontrib-htmlhelp	1.0.2	sphinxcontrib-htmlhelp is a sphinx extension which … / BSD-2-Clause
sphinxcontrib-jsmath	1.0.1	A sphinx extension which renders display math in HTML via JavaScript A
sphinxcontrib-qthelp	1.0.2	sphinxcontrib-qthelp is a sphinx extension which outputs QtHelp docume
sphinxcontrib-serializinghtml	1.1.3	sphinxcontrib-serializinghtml is a sphinx extension which outputs "serial
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT

Table 101 – continued from previo

Name	Version	Summary / License
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	6.0.3	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	None / BSD

Table 102 – continued from pre

Name	Version	Summary / License
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.2	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.10	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.7.4	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicts
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free

Table 102 – continued from pre

Name	Version	Summary / License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT

Table 102 – continued from pre

Name	Version	Summary / License
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Inte
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks / B
nltk	3.4.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.3	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.3	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2s	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT

Table 102 – continued from pre

Name	Version	Summary / License
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all

Table 102 – continued from pre

Name	Version	Summary / License
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.7.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	None / None
vs2015_runtime	14.15.26706	MSVC runtimes associated with cl.exe version 19.15.26726 (VS 20
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD

Table 102 – continued from pre

Name	Version	Summary / License
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause

Table 103 – continued from pre

Name	Version	Summary / License
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.7.10	OS-agnostic, system-level binary package and environment manage
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.7.4	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional util
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.7	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause

Table 103 – continued from pre

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-C
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control sett
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Inte
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS

Table 103 – continued from pre

Name	Version	Summary / License
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2s	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.6.3	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial

Table 103 – continued from pre

Name	Version	Summary / License
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause

Table 103 – continued from pre

Name	Version	Summary / License
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.7.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	None / None
vs2015_runtime	14.15.26706	MSVC runtimes associated with cl.exe version 19.15.26726 (VS 20
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /

Table 104 – continued from previo

Name	Version	Summary / License
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.7.4	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT

Table 104 – continued from previo

Name	Version	Summary / License
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT

Table 104 – continued from previo

Name	Version	Summary / License
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause

Table 104 – continued from previo

Name	Version	Summary / License
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
portaudio	19.6.0	A cross platform, open-source, audio I/O library / MIT
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyaudio	0.2.11	Bindings for PortAudio v19, the cross-platform audio stream library / MI
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT

Table 104 – continued from previo

Name	Version	Summary / License
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.7.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1

Table 104 – continued from previo

Name	Version	Summary / License
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause

Table 105 – continued from previo

Name	Version	Summary / License
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.7.4	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT

Table 105 – continued from previo

Name	Version	Summary / License
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause

Table 105 – continued from previo

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	OpenBLAS headers and libraries for developing software that used Open
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-

Table 105 – continued from previo

Name	Version	Summary / License
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.18.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause

Table 105 – continued from previo

Name	Version	Summary / License
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.7.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.07 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
_libgcc_mutex	0.1	Mutex for libgcc and libgcc-ng / None
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.3	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes

Table 106 – continued from previo

Name	Version	Summary / License
babel	2.7.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	None / BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.9.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	None / None
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.16.3	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.2.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.8	high-quality data compressor / bzip2
ca-certificates	2019.5.15	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.6.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.3	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	1.2.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.7.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.18.9	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.4.2	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.7.4	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.7	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.12	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.10.0	Cython implementation of Toolz. High performance functional utilities /
dask	1.2.2	Parallel PyData with Task Scheduling / BSD 3-Clause
dask-core	1.2.2	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.6.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.28.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.1.0	C implementation of Python 3 lru_cache / MIT
filelock	3.0.12	A platform independent file lock. / Public Domain

Table 106 – continued from previo

Name	Version	Summary / License
flask	1.1.1	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.3.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.7	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.17	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.4	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.5.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.21	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4.1	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10.1	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.3.1	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.5.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.1.0	A fast implementation of the Cassowary constraint solver / BSD 3-Clause

Table 106 – continued from previo

Name	Version	Summary / License
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.4.1	A fast and thorough lazy object proxy / BSD-2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.65.2	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	9.1.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.37	PNG reference library / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.2	the SSH library / BSD-3-Clause
libstdcxx-ng	9.1.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.29.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.4	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.4	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	2.0.2	Python hooks for Intel(R) Math Kernel Library runtime control settings.
mkl_fft	1.0.12	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
mock	3.0.5	A library for testing in Python / BSD-2-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.5.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD-3
nltk	3.4.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.44.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau

Table 106 – continued from previo

Name	Version	Summary / License
numpy-base	1.16.4	None / None
numpydoc	0.9.1	Numpy's Sphinx extensions / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1c	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.5.0	A Python Parser / MIT
partd	1.0.0	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.4	Fork of pathlib aiming to support the full stdlib Python API / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.7.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	6.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.1.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.12.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.7.1	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.3	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycairo	1.18.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.3	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.4.2	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.4.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.7.0	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.6.2	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF

Table 106 – continued from previo

Name	Version	Summary / License
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	Python interface to libarchive / CC0-1.0
pytz	2019.1	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.3	Discrete Wavelet Transforms in Python / MIT
pyyaml	5.1.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.5.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.8.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.22.0	Python HTTP for Humans / Apache 2.0
rope	0.14.0	A python refactoring library / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	41.0.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.9.0	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.2	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.6	The Scientific Python Development Environment / MIT
spyder-kernels	0.5.1	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.5	Database Abstraction Library. / MIT
sqlite	3.29.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.10.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.4	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x
sympy	1.4	Python library for symbolic mathematics / BSD-3-Clause
tblib	1.4.0	Traceback serialization library. / BSD 2-Clause
terminado	0.8.2	Terminals served by tornado websockets / BSD 2-Clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.10.0	A functional standard library for Python / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.32.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause

Table 106 – continued from previo

Name	Version	Summary / License
typing	3.7.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.2	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.15.4	The comprehensive WSGI web application library. / BSD 3-Clause
wheel	0.33.4	A built-package format for Python. / MIT
widgetsnbextension	3.5.0	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.2	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	1.0.0	Composable Dictionary Classes / BSD 3-Clause
zipp	0.5.1	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 (Apr 04, 2019)

User-facing changes

- Full conda integration with Windows Powershell.
- The Windows Python package includes an optional feature that, when enabled, will improve DLL handling of library conflicts.
- This is the first release which includes conda 4.6.
- A link is added to the installer so you have the option to easily install PyCharm for Anaconda.

Backend improvements (non-visible changes)

- Anaconda uninstalls faster on Windows.

Major package updates

- bokeh 1.0.2 -> 1.0.4
- dask 1.0.0 -> 1.1.4
- ipython 7.2.0 -> 7.4.0
- jupyterlab 0.35.3 -> 0.35.4
- matplotlib 3.0.2 -> 3.0.3
- mkl 2019.1 -> 2019.3
- numba 0.41.0 -> 0.43.1
- numpy 1.15.4 -> 1.16.2
- pandas 0.23.4 -> 0.24.2
- pillow 5.3.0 -> 5.4.1
- python 3.7.1 -> 3.7.3
- scikit-image 0.14.1 -> 0.14.2
- scikit-learn 0.20.1 -> 0.20.3
- scipy 1.1.0 -> 1.2.1
- spyder 3.3.2 -> 3.3.3
- spyder-kernels 0.3.0 -> 0.4.2

Removed:

- conda
- conda-build
- conda-env

Packages

Anaconda 2019.03 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.1.2	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu

Table 107 – continued from pre

Name	Version	Summary / License
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.6.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop

Table 107 – continued from pre

Name	Version	Summary / License
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.0.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 107 – continued from pre

Name	Version	Summary / License
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common proba
more-itertools	6.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python
psutil	5.6.1	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause

Table 107 – continued from pre

Name	Version	Summary / License
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.3.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT

Table 107 – continued from pre

Name	Version	Summary / License
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	6.0.2	A Python web framework and asynchronous networking library, ori
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.1.2	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.6.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedict
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice

Table 108 – continued from pre

Name	Version	Summary / License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT

Table 108 – continued from pre

Name	Version	Summary / License
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.0.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common proba
more-itertools	6.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL

Table 108 – continued from pre

Name	Version	Summary / License
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python
psutil	5.6.1	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.3.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause

Table 108 – continued from pre

Name	Version	Summary / License
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	6.0.2	A Python web framework and asynchronous networking library, ori
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3

Table 108 – continued from pre

Name	Version	Summary / License
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.1.2	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa

Table 109 – continued from previo

Name	Version	Summary / License
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause

Table 109 – continued from previo

Name	Version	Summary / License
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	6.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause

Table 109 – continued from previo

Name	Version	Summary / License
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD

Table 109 – continued from previo

Name	Version	Summary / License
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	6.0.2	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause

Table 109 – continued from previo

Name	Version	Summary / License
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.5	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT

Table 110 – continued from previo

Name	Version	Summary / License
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0

Table 110 – continued from previo

Name	Version	Summary / License
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	6.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause

Table 110 – continued from previo

Name	Version	Summary / License
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0

Table 110 – continued from previo

Name	Version	Summary / License
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	6.0.2	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS

Table 110 – continued from previo

Name	Version	Summary / License
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.2.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.1.2	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC

Table 111 – continued from previo

Name	Version	Summary / License
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A "smart font" system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 111 – continued from previo

Name	Version	Summary / License
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.4.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.4	Pure Python DBus interface / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.4	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau

Table 111 – continued from previo

Name	Version	Summary / License
matplotlib	3.0.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	6.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0

Table 111 – continued from previo

Name	Version	Summary / License
prompt_toolkit	2.0.9	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.3.1	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.3.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.2	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.3	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.1	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT

Table 111 – continued from previo

Name	Version	Summary / License
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	6.0.2	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.6.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.7.3	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause

Table 112 – continued from pre

Name	Version	Summary / License
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicts
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C

Table 112 – continued from pre

Name	Version	Summary / License
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks / I
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2r	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause

Table 112 – continued from pre

Name	Version	Summary / License
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.5.0	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.3.1	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Table 112 – continued from pre

Name	Version	Summary / License
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT

Table 112 – continued from pre

Name	Version	Summary / License
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnir
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2

Table 113 – continued from pre

Name	Version	Summary / License
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.6.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.7.3	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L

Table 113 – continued from pre

Name	Version	Summary / License
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.16	cross platform menu item installation / BSD

Table 113 – continued from pre

Name	Version	Summary / License
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2r	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis too
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
powershell_shortcut	0.0.1	Powershell shortcut creator for Windows (using menuinst) / BSD
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.5.0	A cross-platform process and system utilities module for Python / B
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities /
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT

Table 113 – continued from pre

Name	Version	Summary / License
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pyreadline	2.1	A python implmementation of GNU readline. / BSD 3-Clause
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.3.1	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BS
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database eng

Table 113 – continued from pre

Name	Version	Summary / License
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.1.0	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Cla
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.1.0	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.7.3	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause

Table 114 – continued from previo

Name	Version	Summary / License
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause

Table 114 – continued from previo

Name	Version	Summary / License
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	18.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause

Table 114 – continued from previo

Name	Version	Summary / License
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
portaudio	19.6.0	A cross platform, open-source, audio I/O library / MIT
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyaudio	0.2.11	Bindings for PortAudio v19, the cross-platform audio stream library / MI
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF

Table 114 – continued from previo

Name	Version	Summary / License
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0

Table 114 – continued from previo

Name	Version	Summary / License
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	

Table 115 – continued from previo

Name	Version	Summary / License
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.7.3	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3

Table 115 – continued from previo

Name	Version	Summary / License
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD-3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause

Table 115 – continued from previo

Name	Version	Summary / License
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0

Table 115 – continued from previo

Name	Version	Summary / License
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.18.0	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /

Table 115 – continued from previo

Name	Version	Summary / License
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2019.03 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.3.0	Atomic file writes / MIT
attrs	19.1.0	attrs is the Python package that will bring back the joy of writing classes

Table 116 – continued from previo

Name	Version	Summary / License
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.7.1	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.1.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.15.0	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.4	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2019.1.23	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2019.3.9	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.12.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.8.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.6.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.8	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.7.3	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.6.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.6	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.1.4	Parallel Python with task scheduling / BSD 3-Clause
dbus	1.13.6	Simple message bus system for applications to talk to one another / GPL2
decorator	4.4.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.26.0	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI

Table 116 – continued from previo

Name	Version	Summary / License
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.4.0	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.13	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.9.0	Read and write HDF5 files from Python. / BSD-3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.4	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.5.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.8	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.3	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.16	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.3	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	3.0.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT

Table 116 – continued from previo

Name	Version	Summary / License
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.64.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20181209	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.36	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.10	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.9	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.33	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.28.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.3.2	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.1	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.10	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	5.0.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.6.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.4.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.8	Jupyter Notebook / BSD 3-clause
numba	0.43.1	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.9	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.16.2	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.16.2	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause

Table 116 – continued from previo

Name	Version	Summary / License
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.6.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1b	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	19.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.24.2	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.2.3.2	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.4	A Python Parser / MIT
partd	0.3.10	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.43	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.4.1	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	19.0.3	PyPA recommended tool for installing Python packages / MIT
pixman	0.38.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.5.0.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.9.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.6.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.6.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.8.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pycairo	1.18.0	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.5.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.1.1	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.26	DB API Module for ODBC / MIT
pyopenssl	19.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.1	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pyrsistent	0.14.11	Persistent/Functional/Immutable data structures / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.5.1	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.3.1	Simple and powerful testing with Python. / MIT
python	2.7.16	General purpose programming language / PSF
python-dateutil	2.8.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	

Table 116 – continued from previo

Name	Version	Summary / License
pytz	2018.9	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	5.1	YAML parser and emitter for Python / MIT
pyzmq	18.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.7	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.7.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.12.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.10.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.2	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.3	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.2.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.8.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.1.2	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
soupsieve	1.8	A modern CSS selector implementation for BeautifulSoup / MIT
sphinx	1.8.5	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.3	The Scientific Python Development Environment / MIT
spyder-kernels	0.4.2	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.3.1	Database Abstraction Library. / MIT
sqlite	3.27.2	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.7.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.31.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS

Table 116 – continued from previo

Name	Version	Summary / License
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.33.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.11.1	Module for decorators, wrappers and monkey patching / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.5	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.3.1	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.4	Composable Dictionary Classes / BSD 3-Clause
zipp	0.3.3	A pathlib-compatible Zipfile object wrapper / MIT
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 (Dec 21, 2018)

User-facing changes

- Anaconda version numbers now follow a year.month format.
- OpenSSL 1.1.1 is installed on all platforms and versions except for the Python 2.7 on win-32 and win-64.
- This is the last Anaconda release for the linux-32 platform.

Backend improvements (non-visible changes)

- Improvements have been made to conda which will decrease the time it takes to solve and install packages.

Major package updates

- bokeh 0.13.0 -> 1.0.2
- dask 0.19.1 -> 1.0.0
- ipython 6.5.0 -> 7.2.0
- jupyter_client 5.2.3 -> 5.2.4
- jupyter_console 5.2.0 -> 6.0.0
- jupyterlab 0.34.9 -> 0.35.3
- matplotlib 2.2.3 -> 3.0.2

- mkl 2019.0 -> 2019.1
- numba 0.39.0 -> 0.41.0
- numpy 1.15.1 -> 1.15.4
- pillow 5.2.0 -> 5.3.0
- python 3.7.0 -> 3.7.1
- requests 2.19.1 -> 2.21.0
- scikit-image 0.14.0 -> 0.14.1
- scikit-learn 0.19.2 -> 0.20.1
- spyder 3.3.1 -> 3.3.2
- spyder-kernels 0.2.6 -> 0.3.0
- sympy 1.2 -> 1.3
- conda 4.5.12
- conda-build 3.17.6
- conda-env 2.6.0
- jupyterlab_server 0.2.0

Packages

Anaconda 2018.12 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be

Table 117 – continued from pre

Name	Version	Summary / License
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop

Table 117 – continued from pre

Name	Version	Summary / License
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	17.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 117 – continued from pre

Name	Version	Summary / License
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common proba
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics,
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python
psutil	5.4.8	A cross-platform process and system utilities module for Python / B
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT

Table 117 – continued from pre

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful

Table 117 – continued from pre

Name	Version	Summary / License
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Claus
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause

Table 118 – continued from pre

Name	Version	Summary / License
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like app
keyring	17.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C

Table 118 – continued from pre

Name	Version	Summary / License
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-C
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common proba
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks / I
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT

Table 118 – continued from pre

Name	Version	Summary / License
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python
psutil	5.4.8	A cross-platform process and system utilities module for Python / B
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT

Table 118 – continued from pre

Name	Version	Summary / License
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind

Table 118 – continued from pre

Name	Version	Summary / License
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnir
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2

Table 119 – continued from previo

Name	Version	Summary / License
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause

Table 119 – continued from previo

Name	Version	Summary / License
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	17.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel

Table 119 – continued from previo

Name	Version	Summary / License
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach

Table 119 – continued from previo

Name	Version	Summary / License
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /

Table 119 – continued from previo

Name	Version	Summary / License
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /

Table 120 – continued from previo

Name	Version	Summary / License
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.5	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.16.3	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT

Table 120 – continued from previo

Name	Version	Summary / License
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL

Table 120 – continued from previo

Name	Version	Summary / License
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause

Table 120 – continued from previo

Name	Version	Summary / License
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause

Table 120 – continued from previo

Name	Version	Summary / License
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause

Table 121 – continued from previo

Name	Version	Summary / License
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.4	Pure Python DBus interface / MIT

Table 121 – continued from previo

Name	Version	Summary / License
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	17.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.

Table 121 – continued from previo

Name	Version	Summary / License
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT

Table 121 – continued from previo

Name	Version	Summary / License
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.0	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT

Table 121 – continued from previo

Name	Version	Summary / License
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 32-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.1.0	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.1	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau

Table 122 – continued from previo

Name	Version	Summary / License
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT

Table 122 – continued from previo

Name	Version	Summary / License
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	5.1.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	7.2.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.4	Pure Python DBus interface / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	6.0.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.35.3	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_server	0.2.0	A set of server components for JupyterLab and JupyterLab like applicatio
keyring	17.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause

Table 122 – continued from previo

Name	Version	Summary / License
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	3.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause

Table 122 – continued from previo

Name	Version	Summary / License
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	2.0.7	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	2.2.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.3	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.5.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.2.0	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.1	Pytest plugin for detecting inadvertent open file handles / BSD

Table 122 – continued from previo

Name	Version	Summary / License
pytest-remotedata	0.3.1	Pytest plugin for controlling remote data access / BSD
python	3.7.1	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.0	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1

Table 122 – continued from previo

Name	Version	Summary / License
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be

Table 123 – continued from pre

Name	Version	Summary / License
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT

Table 123 – continued from pre

Name	Version	Summary / License
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	17.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause

Table 123 – continued from pre

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics,
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks /
nltk	3.4	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT

Table 123 – continued from pre

Name	Version	Summary / License
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.8	A cross-platform process and system utilities module for Python / B
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Claus
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause

Table 123 – continued from pre

Name	Version	Summary / License
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl

Anaconda 2018.12 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.os	0.1.1	Backport of new features in Python's os module / Python Software
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.2	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.12	OS-agnostic, system-level binary package and environment manage
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri

Table 124 – continued from pre

Name	Version	Summary / License
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2019.0.0	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.

Table 124 – continued from pre

Name	Version	Summary / License
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	17.0.0	Store and access your passwords safely / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.2	Python package for creating and manipulating complex networks / I
nltk	3.4	Build Python programs to work with human language data / Apache

Table 124 – continued from pre

Name	Version	Summary / License
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.8	A cross-platform process and system utilities module for Python / B
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Claus

Table 124 – continued from pre

Name	Version	Summary / License
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.5	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, ori
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF

Table 124 – continued from pre

Name	Version	Summary / License
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode string
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character code
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) sp
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl

Anaconda 2018.12 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M

Table 125 – continued from previo

Name	Version	Summary / License
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A

Table 125 – continued from previo

Name	Version	Summary / License
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	17.0.0	Store and access your passwords safely / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20170329	Editline Library (libedit) / NetBSD

Table 125 – continued from previo

Name	Version	Summary / License
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert f
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0

Table 125 – continued from previo

Name	Version	Summary / License
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
portaudio	19.6.0	A cross platform, open-source, audio I/O library / MIT
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyaudio	0.2.11	Bindings for PortAudio v19, the cross-platform audio stream library / MI
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSI
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Table 125 – continued from previo

Name	Version	Summary / License
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause

Table 125 – continued from previo

Name	Version	Summary / License
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.15.1	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT

Table 126 – continued from previo

Name	Version	Summary / License
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.16.3	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT

Table 126 – continued from previo

Name	Version	Summary / License
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,

Table 126 – continued from previo

Name	Version	Summary / License
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0

Table 126 – continued from previo

Name	Version	Summary / License
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.18.0	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2

Table 126 – continued from previo

Name	Version	Summary / License
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
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Anaconda 2018.12 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes

Table 127 – continued from previo

Name	Version	Summary / License
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedication a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD

Table 127 – continued from previo

Name	Version	Summary / License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT

Table 127 – continued from previo

Name	Version	Summary / License
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)

Table 127 – continued from previo

Name	Version	Summary / License
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.18.0	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL

Table 127 – continued from previo

Name	Version	Summary / License
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause

Table 127 – continued from previo

Name	Version	Summary / License
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 2018.12 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.12	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.6	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.9	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS

Table 128 – continued from previo

Name	Version	Summary / License
backports.os	0.1.1	Backport of new features in Python's os module / Python Software Found
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	3.0.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	1.0.2	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.11.29	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	7.0	Python composable command line interface toolkit / BSD-3-Clause
cloudpickle	0.6.1	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.4.1	Cross-platform colored terminal text / BSD-3-Clause
conda	4.5.12	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.17.6	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.1.1	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.4.2	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.29.2	The Cython compiler for writing C extensions for the Python language /
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	1.0.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.25.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.10	A platform independent file lock. / Public Domain

Table 128 – continued from previo

Name	Version	Summary / License
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.7	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
future	0.17.1	Clean single-source support for Python 3 and 2 / MIT
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.7	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.8	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
importlib_metadata	0.6	A library to access the metadata for a Python package / APACHE-2.0
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.1	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD-3-Clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD-3-Clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.2	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	1.1.0	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.13.2	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.4	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD-3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause

Table 128 – continued from previo

Name	Version	Summary / License
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
krb5	1.16.1	A network authentication protocol. / MIT
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libarchive	3.3.3	Multi-format archive and compression library / BSD 2-Clause
libcurl	7.63.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
liblief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
libpng	1.6.35	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.26.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lz4-c	1.8.1.2	Extremely Fast Compression algorithm / BSD 2-clause
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.1.0	A Python module that implements the jinja2.Markup string / BSD-3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.6	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.2	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.1.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.2	Python package for creating and manipulating complex networks / BSD 3
nltk	3.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.7.4	Jupyter Notebook / BSD 3-clause

Table 128 – continued from previo

Name	Version	Summary / License
numba	0.41.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.4	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.4	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.12	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.1.1a	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	18.0	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.9	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.5.0	A module wrapper for os.path / MIT
pathlib2	2.3.3	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.5	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.3.0	Pillow is the friendly PIL fork by Alex Clark and Contributors / PIL
pip	18.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.8.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.5.0	Python client for the Prometheus monitoring system / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.8	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.7.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py-lief	0.9.0	A cross platform library to parse, modify and abstract ELF, PE and Mach
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.18.0	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.19	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.3.1	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.25	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.3.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL

Table 128 – continued from previo

Name	Version	Summary / License
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	4.0.2	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.5	Extensions to the standard Python datetime module. / BSD 3 Clause
python-libarchive-c	2.8	
pytz	2018.7	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.1	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.7	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.5.3	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.3	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.2	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.21.0	Python HTTP for Humans / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.20.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	40.6.3	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.12.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.1.0	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.8.2	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.2	The Scientific Python Development Environment / MIT
spyder-kernels	0.3.0	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.15	Database Abstraction Library. / MIT
sqlite	3.26.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.3	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.3	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.4.2	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1.1	A Python web framework and asynchronous networking library, originall

Table 128 – continued from previo

Name	Version	Summary / License
tqdm	4.28.1	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.24.1	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.32.3	A built-package format for Python. / MIT
widgetsnbextension	3.4.2	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
wurlitzer	1.0.2	Capture C-level stdout/stderr in Python / MIT
xlrd	1.2.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zstd	1.3.7	Zstandard - Fast real-time compression algorithm / BSD 3-Clause

Anaconda 5.3.1 (Nov 19, 2018)

User-facing changes

- The Anaconda Installers are shipped with a fix for VSCode Installation. xref: https://github.com/ContinuumIO/anaconda-issues/issues/10286

Anaconda 5.3.0 (Sept 28, 2018)

User-facing changes

- The Anaconda3 installers ship with python 3.7 instead of python 3.6
- Windows installers disallow the character , in installation path to prevent usability issues.
- Instructions in the macOS pkg installer for choice of initializing installation has been improved.

Backend improvements (non-visible changes)

- Installers mimic the functionality of "conda init" (a highly anticipated feature in conda 4.6) instead of just adding $PREFIX/bin to PATH in bash profile.
- The repodata_record.json file for each package in the package cache directory is populated correctly, which will assist in offline installation of packages in new environments.

Major package updates

- anaconda-client 1.6.14 -> 1.7.2
- bokeh 0.12.16 -> 0.13.0
- dask 0.17.5 -> 0.19.1
- ipython 6.4.0 -> 6.5.0
- jupyterlab 0.32.1 -> 0.34.9
- jupyterlab_launcher 0.10.5 -> 0.13.1
- matplotlib 2.2.2 -> 2.2.3
- mkl 2018.0.2 -> 2019.0
- numba 0.38.0 -> 0.39.0
- numpy 1.14.3 -> 1.15.1
- pandas 0.23.0 -> 0.23.4
- pillow 5.1.0 -> 5.2.0
- python 3.6.5 -> 3.7.0
- requests 2.18.4 -> 2.19.1
- scikit-image 0.13.1 -> 0.14.0
- scikit-learn 0.19.1 -> 0.19.2
- seaborn 0.8.1 -> 0.9.0
- spyder 3.2.8 -> 3.3.1
- sympy 1.1.1 -> 1.2
- spyder-kernels 0.2.6

Packages

Anaconda 5.3.0 for 64-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.

Table 129 – continued from pre

Name	Version	Summary / License
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appdirs	1.4.3	A small Python module for determining appropriate platform-speci
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.0.4	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.4	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utili
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat

Table 129 – continued from pre

Name	Version	Summary / License
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.5.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.34.9	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.13.1	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT

Table 129 – continued from pre

Name	Version	Summary / License
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common proba
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.1	Python package for creating and manipulating complex networks / I
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT

Table 129 – continued from pre

Name	Version	Summary / License
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.7	A cross-platform process and system utilities module for Python / B
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	2.1.1	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	3.8.0	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.4.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.0	Pytest plugin for controlling remote data access / BSD
python	3.7.0	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Claus
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.4	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BS

Table 129 – continued from pre

Name	Version	Summary / License
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, ori
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and mo
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT

Table 129 – continued from pre

Name	Version	Summary / License
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 32-bit Windows with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appdirs	1.4.3	A small Python module for determining appropriate platform-speci
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	2.0.2	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.4	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utili
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.11	OS-agnostic, system-level binary package and environment manage

Table 130 – continued from pre

Name	Version	Summary / License
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.5.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l

Table 130 – continued from pre

Name	Version	Summary / License
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.34.9	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.13.1	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundat
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Inte
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common proba
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.1	Python package for creating and manipulating complex networks / I
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT

Table 130 – continued from pre

Name	Version	Summary / License
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.7	A cross-platform process and system utilities module for Python / B
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	2.1.1	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	3.8.0	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.4.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.0	Pytest plugin for controlling remote data access / BSD

Table 130 – continued from pre

Name	Version	Summary / License
python	3.7.0	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Claus
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.4	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, ori
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and mo

Table 130 – continued from pre

Name	Version	Summary / License
vc	14.1	A meta-package to impose mutual exclusivity among software built
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for macOS on Intel 64-bit with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BSI
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Clause

Table 131 – continued from previous page

Name	Version	Summary / License
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.9.1	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.3	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.2	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.10.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python language / Ap
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applications writ
glob2	0.5	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
icu	58.2	International Components for Unicode. / MIT
idna	2.2	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause

Table 131 – continued from previous page

Name	Version	Summary / License
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	JupyterLab PRE-ALPHA / BSD-3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC Ru
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GF
markupsafe	0.23	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel (R) Ma
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probability dis
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C

Table 131 – continued from previous page

Name	Version	Summary / License
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	Jupyter Notebook / BSD 3-clause
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.42	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	ASN.1 types and codecs / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.17	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD

Table 131 – continued from previous page

Name	Version	Summary / License
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.12.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.5.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	The Scientific Python Development Environment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
tornado	5.0.2	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT

Table 131 – continued from previous page

Name	Version	Summary / License
widgetsnbextension	3.2.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.3.0 for 64-bit Linux on IBM Power CPUs with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.0.4	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.4	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / N
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /

Table 132 – continued from previo

Name	Version	Summary / License
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.5.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT

Table 132 – continued from previo

Name	Version	Summary / License
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.34.9	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.13.1	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0

Table 132 – continued from previo

Name	Version	Summary / License
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	2.1.1	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT

Table 132 – continued from previo

Name	Version	Summary / License
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.8.0	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.4.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.0	Pytest plugin for controlling remote data access / BSD
python	3.7.0	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.4.0	event-driven networking engine / MIT
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /

Table 132 – continued from previo

Name	Version	Summary / License
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 64-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.0.4	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.4	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause

Table 133 – continued from previo

Name	Version	Summary / License
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A "smart font" system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT

Table 133 – continued from previo

Name	Version	Summary / License
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.5.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.3.1	Pure Python DBus interface / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.34.9	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.13.1	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,

Table 133 – continued from previo

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT

Table 133 – continued from previo

Name	Version	Summary / License
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	2.1.1	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.8.0	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.4.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.0	Pytest plugin for controlling remote data access / BSD
python	3.7.0	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.0	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo

Table 133 – continued from previo

Name	Version	Summary / License
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 32-bit Linux with Python 3.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	2.0.4	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	3.0.4	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-Clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause

Table 134 – continued from previo

Name	Version	Summary / License
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.5.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MI
jeepney	0.3.1	Pure Python DBus interface / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT

Table 134 – continued from previo

Name	Version	Summary / License
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.34.9	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.13.1	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundation or
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Intel (R)
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause

Table 134 – continued from previo

Name	Version	Summary / License
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	2.1.1	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock

Table 134 – continued from previo

Name	Version	Summary / License
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.8.0	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.4.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.3.0	Pytest plugin for controlling remote data access / BSD
python	3.7.0	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
secretstorage	3.1.0	Provides a way for securely storing passwords and other secrets. / BSD-3
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T

Table 134 – continued from previo

Name	Version	Summary / License
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appdirs	1.4.3	A small Python module for determining appropriate platform-speci
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.8	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF

Table 135 – continued from pre

Name	Version	Summary / License
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utili
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.7	pure Python COM package / MIT
conda	4.5.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7

Table 135 – continued from pre

Name	Version	Summary / License
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.10.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundat
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause

Table 135 – continued from pre

Name	Version	Summary / License
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics,
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.1	Python package for creating and manipulating complex networks /
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT

Table 135 – continued from pre

Name	Version	Summary / License
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.7	A cross-platform process and system utilities module for Python / B
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	3.8.0	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Claus
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.4	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0

Table 135 – continued from pre

Name	Version	Summary / License
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.2	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, ori
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause

Table 135 – continued from pre

Name	Version	Summary / License
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clau
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appdirs	1.4.3	A small Python module for determining appropriate platform-speci
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.8	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing cl
automat	0.7.0	self-service finite-state machines for the programmer on the go / M
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at A
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utili
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.7	pure Python COM package / MIT

Table 136 – continued from pre

Name	Version	Summary / License
conda	4.5.11	OS-agnostic, system-level binary package and environment manage
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python langu
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional util
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicat
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Lice
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Cla
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel prop
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD L
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD 3-clause

Table 136 – continued from pre

Name	Version	Summary / License
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software l
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
keyring	13.2.1	Store and access your passwords safely. / Python Software Foundati
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X deri
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot cor
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Inte
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BS
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics,

Table 136 – continued from pre

Name	Version	Summary / License
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BS
networkx	2.1	Python package for creating and manipulating complex networks /
nltk	3.3.0	Build Python programs to work with human language data / Apach
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.7	A cross-platform process and system utilities module for Python / B
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities /
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial

Table 136 – continued from pre

Name	Version	Summary / License
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/P
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large ar
pytest	3.8.0	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Claus
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.4	Python bindings for the winpty library / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages /
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.2	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause

Table 136 – continued from pre

Name	Version	Summary / License
tornado	5.1	A Python web framework and asynchronous networking library, ori
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and mo
vc	9	A meta-package to impose mutual exclusivity among software built
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.15.26706	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Wind
win_unicode_console	0.5	A Python package to enable Unicode input and display when runnin
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert st
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for comm
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zl
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BSI
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD

Table 137 – continued from previous page

Name	Version	Summary / License
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveStat
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.9.1	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.3	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.2	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.10.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.6-
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python language / Ap
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD 3-
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / Ap
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and PyP
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT

Table 137 – continued from previous page

Name	Version	Summary / License
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applications writ
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
icu	58.2	International Components for Unicode. / MIT
idna	2.2	Internationalized Domain Names in Applications (IDNA). / BSD Like
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	JupyterLab PRE-ALPHA / BSD-3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC Ru
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, G
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / G
markupsafe	0.23	A Python module that implements the jinja2.Markup string / BSD 3-Clause

Table 137 – continued from previous page

Name	Version	Summary / License
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	Jupyter Notebook / BSD 3-clause
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.42	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	ASN.1 types and codecs / BSD 2-Clause
pyaudio	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT

Table 137 – continued from previous page

Name	Version	Summary / License
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.17	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.0	Extensions to the standard Python datetime module. / BSD 3 Clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.12.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platforn
setuptools	38.5.1	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	The Scientific Python Development Environment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x. /

Table 137 – continued from previous page

Name	Version	Summary / License
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
tornado	5.0.2	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.3.0 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.8	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF

Table 138 – continued from previo

Name	Version	Summary / License
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT

Table 138 – continued from previo

Name	Version	Summary / License
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception

Table 138 – continued from previo

Name	Version	Summary / License
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numexpr	2.6.7	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.5	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.14.5	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT

Table 138 – continued from previo

Name	Version	Summary / License
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.17.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.8.0	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause

Table 138 – continued from previo

Name	Version	Summary / License
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet /
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.2	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.4.0	event-driven networking engine / MIT
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.8	Community-developed Python Library for Astronomy / BSD
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utilities. /

Table 139 – continued from previo

Name	Version	Summary / License
dask	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A “smart font” system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause

Table 139 – continued from previo

Name	Version	Summary / License
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause

Table 139 – continued from previo

Name	Version	Summary / License
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.17.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain

Table 139 – continued from previo

Name	Version	Summary / License
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.8.0	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause

Table 139 – continued from previo

Name	Version	Summary / License
subprocess32	3.5.2	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.3.0 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.11	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.7.2	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.9.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
appdirs	1.4.3	A small Python module for determining appropriate platform-specific dir
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.5	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.8	Community-developed Python Library for Astronomy / BSD

Table 140 – continued from previo

Name	Version	Summary / License
atomicwrites	1.2.1	Atomic file writes. / MIT
attrs	18.2.0	attrs is the Python package that will bring back the joy of writing classes
automat	0.7.0	self-service finite-state machines for the programmer on the go / MIT
babel	2.6.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. /
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.3	Python library designed for screen-scraping / MIT
bitarray	0.8.3	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.4	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.4	A blocking, shuffling and loss-less compression library that can be faster
bokeh	0.13.0	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.49.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.8.24	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.5	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.11	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.15.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
constantly	15.1.0	Symbolic constants in Python / MIT
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.3.1	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.5	The Cython compiler for writing C extensions for the Python language / A
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dask-core	0.19.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
defusedxml	0.5.0	XML bomb protection for Python stdlib modules / PSF 2.0
distributed	1.23.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedication a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD

Table 140 – continued from previo

Name	Version	Summary / License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.6	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.8	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.6	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.13.0	A library for configuring and customizing font access. / MIT
freetype	2.9.1	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
fribidi	1.0.5	The Free Implementation of the Unicode Bidirectional Algorithm. / LGP
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.6	Coroutine-based network library / MIT
glib	2.56.2	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.12	A "smart font" system that handles the complexities of lesser-known lang
greenlet	0.4.15	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.8.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.8.8	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
hyperlink	18.0.0	Immutable, Pythonic, correct URLs. / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.7	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.4.1	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.1.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
incremental	17.5.0	A library that versions your Python projects / MIT License
intel-openmp	2019.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.9.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.8.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.4.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.12.1	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause

Table 140 – continued from previo

Name	Version	Summary / License
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.33.11	JupyterLab PRE-ALPHA / BSD-3-Clause
jupyterlab_launcher	0.11.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.61.0	tool and library for transferring data with URL syntax / MIT/X derivate (
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	8.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.3.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	8.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libuuid	1.0.3	Portable uuid C library. / BSD 3-Clause
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
linecache2	1.0.0	Backport of the linecache module / PSF 1.0
llvmlite	0.24.0	A lightweight LLVM python binding for writing JIT compilers / New BS
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.5	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.2.3	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2019.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.4	NumPy-based implementation of Fast Fourier Transform using Intel (R) M
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probability
more-itertools	4.3.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.1.0	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	4.0.1	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.6.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.4.0	Converting Jupyter Notebooks / BSD-3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.3.0	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.6.0	Jupyter Notebook / BSD 3-clause
numba	0.39.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clause
numexpr	2.6.8	Fast numerical expression evaluator for NumPy. / MIT

Table 140 – continued from previo

Name	Version	Summary / License
numpy	1.15.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpy-base	1.15.1	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.46	parse, read and write Microsoft OLE2 files / BSD 2-Clause
openpyxl	2.5.6	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2p	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.4	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.42.4	Text layout and rendering engine. / LGPL-2.1
parso	0.3.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	11.1.0	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.42	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.6.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.2.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.7.1	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prometheus_client	0.3.1	Python client for the Prometheus monitoring system. / Apache 2.0
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.7	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.6.0	Run a subprocess in a pseudo terminal / ISC
py	1.6.0	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.4.4	ASN.1 types and codecs / BSD 2-Clause
pyasn1-modules	0.2.2	A collection of ASN.1-based protocols modules. / BSD 2-Clause
pycairo	1.17.1	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.2	A Python Interface To The cURL library / LGPL, MIT
pyflakes	2.0.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.9.2	python code static checker / GPL
pyodbc	4.0.24	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.4	Brings together Python, HDF5 and NumPy to easily handle large amount

Table 140 – continued from previo

Name	Version	Summary / License
pytest	3.8.0	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.5	World timezone definitions, modern and historical. / MIT
pywavelets	1.0.0	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.13	YAML parser and emitter for Python / MIT
pyzmq	17.1.2	Python bindings for zeromq / BSD 3-clause
qt	5.9.6	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.4.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.5.0	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL-3.0
requests	2.19.1	Python HTTP for Humans. / Apache 2.0
rope	0.11.0	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.46	A patched copy of ruamel.yaml. / MIT
scandir	1.9.0	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.14.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.2	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.9.0	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all platfo
service_identity	17.0.0	Service identity verification for pyOpenSSL. / MIT
setuptools	40.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	1.0.1	Python Sorted Collections / Apache-2.0
sortedcontainers	2.0.5	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.7.9	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.1.0	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.3.1	The Scientific Python Development Environment / MIT
spyder-kernels	0.2.6	Jupyter kernels for the Spyder console / MIT
sqlalchemy	1.2.11	Database Abstraction Library. / MIT
sqlite	3.24.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.5.2	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.2	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 2-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.8	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.1	A Python web framework and asynchronous networking library, originall
tqdm	4.26.0	A Fast, Extensible Progress Meter / MPLv2.0, MIT
traceback2	1.4.0	Backports of the traceback module / PSF 2.0

Table 140 – continued from previo

Name	Version	Summary / License
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
twisted	18.7.0	event-driven networking engine / MIT
typing	3.6.6	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unittest2	1.1.0	The new features in unittest backported to Python 2.4+ / BSD
unixodbc	2.3.7	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.23	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.4.1	Interactive Widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.1.0	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib
zope	1.0	web application server / BSD
zope.interface	4.5.0	Interfaces for Python / ZPL 2.1

Anaconda 5.2.0 (May 30, 2018)

User-facing changes

- Windows installers disallow the characters `! % ^ =` in installation path to prevent later usability issues
- Improved Windows multi-user installations by providing more dynamic shortcut working directory behavior
- Default channels point to repo.anaconda.com instead of repo.anaconda.com

Backend improvements (non-visible changes)

- Security fixes for more than 20 packages based on a deep-dive of CVE vulnerabilities
- Windows installer uses a trimmed down value for `PATH` env var, to avoid DLL hell with existing software
- History file in the conda-meta directory is populated correctly to improve behavior of `--prune`
- Developer certificate for macOS pkg installers has been updated to Anaconda, Inc.

Major package updates

- anaconda-client 1.6.9 -> 1.6.14
- bokeh 0.12.13 -> 0.12.16
- dask 0.16.1 -> 0.17.5
- ipython 6.2.1 -> 6.4.0
- jupyter_client 5.2.2 -> 5.2.3
- jupyterlab 0.31.5 -> 0.32.1
- jupyterlab_launcher 0.10.2 -> 0.10.5
- matplotlib 2.1.2 -> 2.2.2
- mkl 2018.0.1 -> 2018.0.2
- numba 0.36.2 -> 0.38.0
- numpy 1.14.0 -> 1.14.3
- pandas 0.22.0 -> 0.23.0
- pillow 5.0.0 -> 5.1.0
- python 3.6.4 -> 3.6.5
- scipy 1.0.0 -> 1.1.0
- spyder 3.2.6 -> 3.2.8
- statsmodels 0.8.0 -> 0.9.0
- blas 1.0

Packages

Anaconda 5.2.0 for 64-bit Windows with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pyth
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LG
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writ
babel	2.5.3	Utilities to internationalize and localize Python applications /
backcall	0.1.0	Specifications for callback functions passed in to an API / BS
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

Table 141 – continued from

Name	Version	Summary / License
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that ca
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Claus
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-C
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.5.4	OS-agnostic, system-level binary package and environment m
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Claus
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python devel
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functiona
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain D
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / M
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good inten
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 an
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification /
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Inte

Table 141 – continued from

Name	Version	Summary / License
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / B
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-C
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / I
jedi	0.12.0	An autocompletion tool for Python that can be used for text ed
jinja2	2.10	An easy to use stand-alone template engine written in pure py
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free softv
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / M
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in on
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-c
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-claus
jupyterlab	0.32.1	An extensible environment for interactive and reproducible co
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Claus
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BS
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
libiconv	1.15	Provides iconv for systems which don't have one (or that cann
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compiler
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-C
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD
lzo	2.10	LZO is a portable lossless data compression library written in
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / I
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common

Table 141 – continued from

Name	Version	Summary / License
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MI
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analy
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format
networkx	2.1	Python package for creating and manipulating complex netwo
nltk	3.3.0	Build Python programs to work with human language data / A
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. /
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BS
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-C
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MI
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and T
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clau
pandas	0.23.0	High-performance, easy-to-use data structures and data analys
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. /
patsy	0.5.0	Describing statistical models in Python using symbolic formu
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / M
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Py
psutil	5.4.5	A cross-platform process and system utilities module for Pyth
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facili
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT

Table 141 – continued from

Name	Version	Summary / License
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Comm
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Ano
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle la
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests /
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / B
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.1	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin)
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packag
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickl
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Cla
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and S
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and bea
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL databas
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause

Table 141 – continued from

Name	Version	Summary / License
testpath	0.3.1	Testpath is a collection of utilities for Python code working wi
tk	8.6.7	A dynamic programming language with GUI support. Bundle
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking librar
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode s
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, a
vc	14	A meta-package to track VC features. / Modified BSD Licens
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Cl
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on
win_unicode_console	0.5	A Python package to enable Unicode input and display when r
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' c
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (t
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clau
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSI
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression librar

Anaconda 5.2.0 for 32-bit Windows with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pyth
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LG
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writ
babel	2.5.3	Utilities to internationalize and localize Python applications /
backcall	0.1.0	Specifications for callback functions passed in to an API / BSI
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT

Table 142 – continued from

Name	Version	Summary / License
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that ca
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Claus
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-C
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.5.4	OS-agnostic, system-level binary package and environment m
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Claus
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python devel
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python l
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functiona
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain D
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / M
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good inten
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 an
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD

Table 142 – continued from

Name	Version	Summary / License
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification /
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Inte
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / B
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-C
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / I
jedi	0.12.0	An autocompletion tool for Python that can be used for text ed
jinja2	2.10	An easy to use stand-alone template engine written in pure py
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free softw
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / M
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in on
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-c
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-claus
jupyterlab	0.32.1	An extensible environment for interactive and reproducible co
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Claus
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BS
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
libiconv	1.15	Provides iconv for systems which don't have one (or that cann
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
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libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
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locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-C
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD
lzo	2.10	LZO is a portable lossless data compression library written in
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / I
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
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menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD

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Name	Version	Summary / License
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MI
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msys2-conda-epoch	20160418	
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
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numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BS
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-C
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MI
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and T
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clau
pandas	0.23.0	High-performance, easy-to-use data structures and data analys
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
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path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. /
patsy	0.5.0	Describing statistical models in Python using symbolic formu
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
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pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. /
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Py
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py	1.5.3	library with cross-python path, ini-parsing, io, code, log facili
pycodestyle	2.4.0	Python style guide checker / MIT
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pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause

Table 142 – continued from

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pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Comm
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Ano
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle la
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests /
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / B
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3
pytz	2018.4	World timezone definitions, modern and historical. / MIT
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pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin)
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packag
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickl
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Cla
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and S
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and bea
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL databas
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD

Table 142 – continued from

Name	Version	Summary / License
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working wi
tk	8.6.7	A dynamic programming language with GUI support. Bundle
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking librar
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode s
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, a
vc	14	A meta-package to track VC features. / Modified BSD License
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Cl
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on
win_unicode_console	0.5	A Python package to enable Unicode input and display when r
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' c
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (t
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clau
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression librar

Anaconda 5.2.0 for macOS on Intel 64-bit with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD

Table 143 – continued from p

Name	Version	Summary / License
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.3.0	Coroutine-based network library / MIT

Table 143 – continued from p

Name	Version	Summary / License
glib	2.56.1	Provides core application building blocks for libraries and applicati
glob2	0.6	Version of the glob module that supports recursion via **, and can
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / L
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot con
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl

Table 143 – continued from p

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probal
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poir
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause

Table 143 – continued from p

Name	Version	Summary / License
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python /
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause

Table 143 – continued from p

Name	Version	Summary / License
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 64-bit Linux on IBM Power CPUs with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.23.0	Python ASN.1 library with a focus on performance and a pythonic A

Table 144 – continued from p

Name	Version	Summary / License
astroid	1.6.2	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.15	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.1	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free

Table 144 – continued from p

Name	Version	Summary / License
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicati
glob2	0.6	Version of the glob module that supports recursion via **, and can
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / L
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.11.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot con
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT

Table 144 – continued from p

Name	Version	Summary / License
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poin
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.3.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python

Table 144 – continued from p

Name	Version	Summary / License
psutil	5.4.1	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla

Table 144 – continued from p

Name	Version	Summary / License
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.3	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 64-bit Linux with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

Table 145 – continued from p

Name	Version	Summary / License
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicatio
glob2	0.6	Version of the glob module that supports recursion via **, and can c
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LG
graphite2	1.3.11	A "smart font" system that handles the complexities of lesser-known

Table 145 – continued from p

Name	Version	Summary / License
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LG
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.6	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. /
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl

Table 145 – continued from p

Name	Version	Summary / License
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probal
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poir
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT

Table 145 – continued from p

Name	Version	Summary / License
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0

Table 145 – continued from p

Name	Version	Summary / License
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 32-bit Linux with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	3.0.2	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD
backcall	0.1.0	Specifications for callback functions passed in to an API / BSD-3-C
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause

Table 146 – continued from p

Name	Version	Summary / License
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicatio
glob2	0.6	Version of the glob module that supports recursion via **, and can c
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LG
graphite2	1.3.11	A “smart font” system that handles the complexities of lesser-known
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LG
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.6	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.4.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. /
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause

Table 146 – continued from p

Name	Version	Summary / License
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probab
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poin
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause

Table 146 – continued from p

Name	Version	Summary / License
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python /
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
pytest-arraydiff	0.2	pytest plugin to help with comparing array output from tests / BSD
pytest-astropy	0.3.0	Meta-package containing dependencies for testing Astropy / BSD
pytest-doctestplus	0.1.3	Pytest plugin with advanced doctest features / BSD
pytest-openfiles	0.3.0	Pytest plugin for detecting inadvertent open file handles / BSD
pytest-remotedata	0.2.1	Pytest plugin for controlling remote data access / BSD
python	3.6.5	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause

Table 146 – continued from p

Name	Version	Summary / License
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD

Table 146 – continued from p

Name	Version	Summary / License
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pyth
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LG
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writ
babel	2.5.3	Utilities to internationalize and localize Python applications /
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module.
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that ca
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Claus
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-C
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.5.4	OS-agnostic, system-level binary package and environment m

Table 147 – continued from

Name	Version	Summary / License
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Claus
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-
configparser	3.5.0	This library brings the updated configparser from Python 3.5 t
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python devel
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functiona
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain D
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / M
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good inten
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 a
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use o
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 /
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification /
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Inte
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / B
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-C
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments

Table 147 – continued from

Name	Version	Summary / License
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. /
jedi	0.12.0	An autocompletion tool for Python that can be used for text ed
jinja2	2.10	An easy to use stand-alone template engine written in pure py
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free softv
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / M
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in on
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-c
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-claus
jupyterlab	0.32.1	An extensible environment for interactive and reproducible co
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Claus
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BS
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
libiconv	1.15	Provides iconv for systems which don't have one (or that cann
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compiler
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-C
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD
lzo	2.10	LZO is a portable lossless data compression library written in
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string /
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform usin
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / M
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analy
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format
networkx	2.1	Python package for creating and manipulating complex netwo
nltk	3.3.0	Build Python programs to work with human language data / A
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing

Table 147 – continued from

Name	Version	Summary / License
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. /
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BS
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-C
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MI
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and T
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clau
pandas	0.23.0	High-performance, easy-to-use data structures and data analys
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. /
patsy	0.5.0	Describing statistical models in Python using symbolic formu
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. /
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Py
psutil	5.4.5	A cross-platform process and system utilities module for Pyth
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facili
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Comm
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Ano
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle la
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.1	Python bindings for the winpty library / MIT

Table 147 – continued from

Name	Version	Summary / License
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.7	scandir, a better directory iterator and faster os.walk() / BSD 3
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin)
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packag
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickl
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Cla
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and S
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and bea
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL databas
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working wi
tk	8.6.7	A dynamic programming language with GUI support. Bundle
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking librar
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode s
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, a
vc	9	A meta-package to track VC features. / Modified BSD Licens
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Cl
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause

Table 147 – continued from

Name	Version	Summary / License
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on
win_unicode_console	0.5	A Python package to enable Unicode input and display when r
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' c
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (t
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clau
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression librar

Anaconda 5.2.0 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pyth
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LG
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writ
babel	2.5.3	Utilities to internationalize and localize Python applications /
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module.
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that ca
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Claus
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC

Table 148 – continued from

Name	Version	Summary / License
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-C
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.5.4	OS-agnostic, system-level binary package and environment m
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Claus
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-
configparser	3.5.0	This library brings the updated configparser from Python 3.5 t
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python devel
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python l
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functiona
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain D
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / M
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good inten
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 a
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use o
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 /
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification /
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Inte
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / B

Table 148 – continued from

Name	Version	Summary / License
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-C
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / I
jedi	0.12.0	An autocompletion tool for Python that can be used for text ed
jinja2	2.10	An easy to use stand-alone template engine written in pure py
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free softv
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / M
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in on
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-c
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-claus
jupyterlab	0.32.1	An extensible environment for interactive and reproducible co
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Claus
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BS
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X
libiconv	1.15	Provides iconv for systems which don't have one (or that cann
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compiler
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-C
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD
lzo	2.10	LZO is a portable lossless data compression library written in
m2w64-gcc-libgfortran	5.3.0	
m2w64-gcc-libs	5.3.0	
m2w64-gcc-libs-core	5.3.0	
m2w64-gmp	6.1.0	
m2w64-libwinpthread-git	5.0.0.4634.697f757	
markupsafe	1.0	A Python module that implements the jinja2.Markup string / I
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.14	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MI
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic

Table 148 – continued from

Name	Version	Summary / License
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
msys2-conda-epoch	20160418	
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analy
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format
networkx	2.1	Python package for creating and manipulating complex netwo
nltk	3.3.0	Build Python programs to work with human language data / A
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. /
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BS
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-C
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MI
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and T
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clau
pandas	0.23.0	High-performance, easy-to-use data structures and data analys
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. /
patsy	0.5.0	Describing statistical models in Python using symbolic formu
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / M
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Py
psutil	5.4.5	A cross-platform process and system utilities module for Pyth
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facili
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.2.0	Create and execute simple grammars / MIT

Table 148 – continued from

Name	Version	Summary / License
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Comm
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Ano
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle la
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	223	Python extensions for Windows / PSF
pywinpty	0.5.1	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library… / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.7	scandir, a better directory iterator and faster os.walk() / BSD 3
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin)
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packag
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickl
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Cla
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and S
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and bea
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL databas
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working wi
tk	8.6.7	A dynamic programming language with GUI support. Bundle
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking librar

Table 148 – continued from

Name	Version	Summary / License
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode s
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, a
vc	9	A meta-package to track VC features. / Modified BSD License
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Cl
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on
win_unicode_console	0.5	A Python package to enable Unicode input and display when r
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' c
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (t
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clau
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression librar

Anaconda 5.2.0 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT

Table 149 – continued from p

Name	Version	Summary / License
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 a
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2

Table 149 – continued from p

Name	Version	Summary / License
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicati
glob2	0.6	Version of the glob module that supports recursion via **, and can
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / L
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go.
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot con
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT

Table 149 – continued from p

Name	Version	Summary / License
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poin
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT

Table 149 – continued from p

Name	Version	Summary / License
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python /
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pyaudio	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.7	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause

Table 149 – continued from p

Name	Version	Summary / License
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.8	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.23.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.2	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.15	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.1	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta

Table 150 – continued from p

Name	Version	Summary / License
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 a
functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at Ac
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicatio
glob2	0.6	Version of the glob module that supports recursion via **, and can c
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LG
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.11.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. /
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C

Table 150 – continued from p

Name	Version	Summary / License
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot con
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poin
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT

Table 150 – continued from p

Name	Version	Summary / License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.3.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.1	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M

Table 150 – continued from p

Name	Version	Summary / License
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.3	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause

Table 151 – continued from p

Name	Version	Summary / License
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicatio
glob2	0.6	Version of the glob module that supports recursion via **, and can c
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LG
graphite2	1.3.11	A “smart font” system that handles the complexities of lesser-known
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LG
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.6	An OpenType text shaping engine. / MIT
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li

Table 151 – continued from p

Name	Version	Summary / License
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. /
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probal
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poir
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau

Table 151 – continued from p

Name	Version	Summary / License
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities /
pycairo	1.15.4	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF

Table 151 – continued from p

Name	Version	Summary / License
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.7	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes

Table 151 – continued from p

Name	Version	Summary / License
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.2.0 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyt
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Claus
anaconda-client	1.6.14	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.8.7	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science proje
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic A
astroid	1.6.3	A abstract syntax tree for Python with inference support. / LGPL 2.
astropy	2.0.6	Community-developed Python Library for Astronomy / BSD
attrs	18.1.0	attrs is the Python package that will bring back the joy of writing cl
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports.functools_lru_cache	1.5	Backport of functools.lru_cache from Python 3.3 as published at Ac
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shu
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blas	1.0	
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.3	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
blosc	1.14.3	A blocking, shuffling and loss-less compression library that can be f
bokeh	0.12.16	Statistical and novel interactive HTML plots for Python / BSD 3-Cl
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2018.03.07	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devi
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.4.16	Python package for providing Mozilla's CA Bundle. / ISC

Table 152 – continued from p

Name	Version	Summary / License
cffi	1.11.5	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilit
cloudpickle	0.5.3	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.5.4	OS-agnostic, system-level binary package and environment manage
conda-build	3.10.5	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Claus
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Pyt
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.2.2	Provides cryptographic recipes and primitives to Python developers
curl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.28.2	The Cython compiler for writing C extensions for the Python langua
cytoolz	0.9.0.1	Cython implementation of Toolz. High performance functional utili
dask	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.17.5	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.13.2	Simple message bus system for applications to talk to one another /
decorator	4.3.0	Better living through Python with decorators. / BSD 3-Clause
distributed	1.21.8	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedicta
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT Licer
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 /
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	3.0.4	A platform independent file lock. / Public Domain
flask	1.0.2	A microframework based on Werkzeug, Jinja2 and good intentions.
flask-cors	3.0.4	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.6	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and Free
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 a
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.3.0	Coroutine-based network library / MIT
glib	2.56.1	Provides core application building blocks for libraries and applicatio
glob2	0.6	Version of the glob module that supports recursion via **, and can c
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LG
graphite2	1.3.11	A “smart font” system that handles the complexities of lesser-known
greenlet	0.4.13	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.14.0	GStreamer Base Plug-ins / GPL2
gstreamer	1.14.0	Library for constructing graphs of media-handling components / LG
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.6	An OpenType text shaping engine. / MIT

Table 152 – continued from p

Name	Version	Summary / License
hdf5	1.10.2	HDF5 is a data model, library, and file format for storing and manag
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clau
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Li
imageio	2.3.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	1.0.0	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Inte
ipaddress	1.0.22	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.2	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.7.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.2.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.3.4	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BS
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.4	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2
jedi	0.12.0	An autocompletion tool for Python that can be used for text editors.
jinja2	2.10	An easy to use stand-alone template engine written in pure python.
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software li
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. /
jupyter_client	5.2.3	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.32.1	An extensible environment for interactive and reproducible computi
jupyterlab_launcher	0.10.5	A Launcher for JupyterLab based applications. / BSD 3-Clause
kiwisolver	1.0.1	A fast implementation of the Cassowary constraint solver / BSD 3-C
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.60.0	tool and library for transferring data with URL syntax / MIT/X deri
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.16	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.13	This is the C-language Binding (XCB) package to the X Window Sy
libxml2	2.9.8	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.23.1	A lightweight LLVM python binding for writing JIT compilers / Ne
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.2.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Cl
lzo	2.10	LZO is a portable lossless data compression library written in ANS
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3
matplotlib	2.2.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 152 – continued from p

Name	Version	Summary / License
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.2	Math library for Intel and compatible processors / proprietary - Inte
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mkl_fft	1.0.1	NumPy-based implementation of Fast Fourier Transform using Intel
mkl_random	1.0.1	Intel (R) MKL-powered package for sampling from common probal
more-itertools	4.1.0	More routines for operating on iterables, beyond itertools / MIT
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily h
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-poin
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSI
msgpack-python	0.5.6	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.5.0	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.2.1	Anaconda Navigator Updater / proprietary - Continuum Analytics, I
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSI
ncurses	6.1	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / B
nltk	3.3.0	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.5.0	A web-based notebook environment for interactive computing / BSI
numba	0.38.0	NumPy aware dynamic Python compiler using LLVM / BSD 2-clau
numexpr	2.6.5	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.3	Array processing for numbers, strings, records, and objects. / BSD 3
numpy-base	1.14.3	
numpydoc	0.8.0	Sphinx extension to support docstrings in Numpy format / BSD 3-C
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.5.3	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2o	OpenSSL is an open-source implementation of the SSL and TLS pr
packaging	17.1	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.23.0	High-performance, easy-to-use data structures and data analysis too
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.2.0	A Python Parser / MIT
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF ex
path.py	11.0.1	A module wrapper for os.path / MIT
pathlib2	2.3.2	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / B
pcre	8.42	Regular expression pattern matching using the same syntax and sem
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.5.0	Pexpect makes Python a better tool for controlling other application
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.1.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PI
pip	10.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.2	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.11	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python /

Table 152 – continued from p

Name	Version	Summary / License
psutil	5.4.5	A cross-platform process and system utilities module for Python / B
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.3	library with cross-python path, ini-parsing, io, code, log facilities / M
pycairo	1.15.4	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.
pycodestyle	2.4.0	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.4	python code static checker / GPL
pyodbc	4.0.23	DB API Module for ODBC / MIT
pyopenssl	18.0.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.9.2	Python binding of the cross-platform GUI toolkit Qt. / Commercial
pysocks	1.6.8	A Python SOCKS client module. See https://github.com/Anorov/Py
pytables	3.4.3	Brings together Python, HDF5 and NumPy to easily handle large an
pytest	3.5.1	Simple and powerful testing with Python. / MIT
python	2.7.15	General purpose programming language / PSF
python-dateutil	2.7.3	Extensions to the standard Python datetime module. / BSD 3 Clause
pytz	2018.4	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	17.0.0	Python bindings for zeromq / BSD 3-clause
qt	5.9.5	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.4.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.7	scandir, a better directory iterator and faster os.walk() / BSD 3-Clau
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BS
scipy	1.1.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.5.0	Python library to natively send files to Trash (or Recycle bin) on all
setuptools	39.1.0	Download, build, install, upgrade, and uninstall Python packages / M
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dum
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.19.8	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snappy	1.1.7	A fast compressor/decompressor / BSD 3-clause
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.6.1	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.10	Python Sorted Container Types: SortedList, SortedDict, and Sorted
sphinx	1.7.4	Sphinx is a tool that makes it easy to create intelligent and beautiful
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD

Table 152 – continued from p

Name	Version	Summary / License
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.7	Database Abstraction Library. / MIT
sqlite	3.23.1	Implements a self-contained, zero-configuration, SQL database eng
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.9.0	Statistical computations and models for use with SciPy / BSD 3-Cla
subprocess32	3.5.0	A backport of the subprocess module from Python 3.2/3.3 for use o
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with file
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl a
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	5.0.2	A Python web framework and asynchronous networking library, ori
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.4	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings
unixodbc	2.3.6	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and mo
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.31.1	A built-package format for Python. / MIT
widgetsnbextension	3.2.1	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Cl
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spr
xlsxwriter	1.0.4	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.4	Data compression software with high compression ratio / LGPL-2.1
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.5	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zli

Anaconda 5.1.0 (Feb 15, 2018)

User-facing changes

- Microsoft Visual Studio Code added as an install option
- Anaconda Navigator has install and launch options for VS Code
- The installer support link has been replaced with the *Getting Started* page
- JupyterLab updated to 0.31.5 on most platforms (Updated to 0.31.4 on Windows)

Backend improvements (non-visible changes)

- Power packages are built with same recipes as rest of distribution
- Fixed some incomplete Windows installations due to interactions with antivirus software
- Fixed spaces in paths problems on Windows
- Anaconda Navigator was removed from the anaconda metapackage (but not the Anaconda installer)
- Installers present warnings when executed on the wrong platform

Major package updates

- anaconda-client 1.6.5 -> 1.6.9
- anaconda-project 0.8.0 -> 0.8.2
- anaconda-navigator 1.6.9 -> 1.7.0
- bokeh 0.12.10 -> 0.12.13
- conda 4.3.27 -> 4.4.10
- conda-build 3.0.27 -> 3.4.1
- dask 0.15.3 -> 0.16.1
- ipython 6.1.0 -> 6.2.1
- jupyter_client 5.1.0 -> 5.2.2
- jupyter_core 4.3.0 -> 4.4.0
- jupyterlab_launcher 0.4.0 -> 0.10.2
- matplotlib 2.1.0 -> 2.1.2
- mkl 2018.0.0 -> 2018.0.1
- numba 0.35.0 -> 0.36.2
- numpy 1.13.3 -> 1.14.0
- pandas 0.20.3 -> 0.22.0
- pillow 4.2.1 -> 5.0.0
- python 3.6.3 -> 3.6.4
- scikit-image 0.13.0 -> 0.13.1
- scipy 0.19.1 -> 1.0.0
- seaborn 0.8.0 -> 0.8.1
- spyder 3.2.4 -> 3.2.6

Packages

Anaconda 5.1.0 for 64-bit Windows with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BSI
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License

Table 153 – continued from previou

Name	Version	Summary / License
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.4	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause

Table 153 – continued from previou

Name	Version	Summary / License
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GP
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.11	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause

Table 153 – continued from previou

Name	Version	Summary / License
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	222	Python extensions for Windows / PSF
pywinpty	0.5	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platforn
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause

Table 153 – continued from previou

Name	Version	Summary / License
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (wi
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pytho
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (cty
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communicatin
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 32-bit Windows with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BS
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astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

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Name	Version	Summary / License
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
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cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT

Table 154 – continued from previou

Name	Version	Summary / License
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GF
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.11	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau

Table 154 – continued from previou

Name	Version	Summary / License
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	222	Python extensions for Windows / PSF
pywinpty	0.5	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT

Table 154 – continued from previou

Name	Version	Summary / License
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (wi
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pytho
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (cty
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communicatin

Table 154 – continued from previou

Name	Version	Summary / License
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for macOS on Intel 64-bit with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BS
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause

Table 155 – continued from previou

Name	Version	Summary / License
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writt
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license

Table 155 – continued from previou

Name	Version	Summary / License
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC Ru
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GI
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause

Table 155 – continued from previou

Name	Version	Summary / License
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT

Table 155 – continued from previou

Name	Version	Summary / License
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platforn
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause

Table 155 – continued from previou

Name	Version	Summary / License
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 64-bit Linux on IBM Power CPUs with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.6	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.23.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.9	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.16.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause

Table 156 – continued from previous page

Name	Version	Summary / License
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.11.0	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL

Table 156 – continued from previous page

Name	Version	Summary / License
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.1	The fastest markdown parser in pure Python. / BSD 3-Clause
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-cl
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.41	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.0	Python style guide checker / MIT

Table 156 – continued from previous page

Name	Version	Summary / License
pexpect	4.3.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.2.5	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.1	Database Abstraction Library. / MIT

Table 156 – continued from previous page

Name	Version	Summary / License
sqlite	3.21.0	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originall
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 64-bit Linux with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BS
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF

Table 157 – continued from previou

Name	Version	Summary / License
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. / LG
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writt
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A "smart font" system that handles the complexities of lesser-known langua
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT

Table 157 – continued from previou

Name	Version	Summary / License
gst-plugins-base	1.12.4	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.4	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.4	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System pr
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GI
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause

Table 157 – continued from previou

Name	Version	Summary / License
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executable
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC

Table 157 – continued from previou

Name	Version	Summary / License
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause

Table 157 – continued from previou

Name	Version	Summary / License
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 32-bit Linux with Python 3.6

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BSI
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause

Table 158 – continued from previou

Name	Version	Summary / License
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. / LG
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writt
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A "smart font" system that handles the complexities of lesser-known langua
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.12.4	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.4	Library for constructing graphs of media-handling components / LGPL 2

Table 158 – continued from previou

Name	Version	Summary / License
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.4	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.2.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System pr
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GF
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 158 – continued from previou

Name	Version	Summary / License
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executable
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT

Table 158 – continued from previou

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	3.6.4	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause

Table 158 – continued from previou

Name	Version	Summary / License
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter exte
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes b
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

Table 159 – continued from previo

Name	Version	Summary / License
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. /
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT

Table 159 – continued from previo

Name	Version	Summary / License
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.19	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.4	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (h
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.34	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSI
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.11	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0

Table 159 – continued from previo

Name	Version	Summary / License
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts

Table 159 – continued from previo

Name	Version	Summary / License
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	222	Python extensions for Windows / PSF
pywinpty	0.5	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M

Table 159 – continued from previo

Name	Version	Summary / License
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communicat
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter exte
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes b
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports.shutil_which	3.5.1	Backport of shutil.which from Python 3.3 / PSF2 & MIT
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT

Table 160 – continued from previo

Name	Version	Summary / License
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.4	pure Python COM package / MIT
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. /
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.6	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause

Table 160 – continued from previo

Name	Version	Summary / License
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.19	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (h
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.34	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSI
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.11	cross platform menu item installation / BSD
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl

Table 160 – continued from previo

Name	Version	Summary / License
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.1	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT

Table 160 – continued from previo

Name	Version	Summary / License
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	222	Python extensions for Windows / PSF
pywinpty	0.5	Python bindings for the winpty library / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI

Table 160 – continued from previo

Name	Version	Summary / License
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
winpty	0.4.3	Winpty provides an interface similar to a Unix pty-master for communicat
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BS
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveStat
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC

Table 161 – continued from previou

Name	Version	Summary / License
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.6-
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD 3-
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / Ap
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and PyP
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writ
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause

Table 161 – continued from previou

Name	Version	Summary / License
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.19	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC Ru
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fro
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GI
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec

Table 161 – continued from previou

Name	Version	Summary / License
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyaudio	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause

Table 161 – continued from previou

Name	Version	Summary / License
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x. /
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co

Table 161 – continued from previou

Name	Version	Summary / License
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.5	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter ext
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.6	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / B
asn1crypto	0.23.0	Python ASN.1 library with a focus on performance and a pythonic API /
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause

Table 162 – continued from previous page

Name	Version	Summary / License
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.2	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.9	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	3.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.16.0	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.0	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSI
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and P
functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveS
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications w
glob2	0.6	Version of the glob module that supports recursion via **, and can captur
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause

Table 162 – continued from previous page

Name	Version	Summary / License
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing d
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.11.0	An autocompletion tool for Python that can be used for text editors. / MI
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1.20170329	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran	3.0.0	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libiconv	1.14	Provides iconv for systems which don't have one (or that cannot convert f
libopenblas	0.2.20	An Optimized BLAS library / BSD
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clau
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.1	The fastest markdown parser in pure Python. / BSD 3-Clause

Table 162 – continued from previous page

Name	Version	Summary / License
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high p
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-C
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-cl
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openblas	0.2.20	An Optimized BLAS library / BSD
openblas-devel	0.2.20	
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protoco
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	2.0.0.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executal
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2
pcre	8.41	Regular expression pattern matching using the same syntax and semantic
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.3.0	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.1	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT

Table 162 – continued from previous page

Name	Version	Summary / License
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySock
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amount
pytest	3.2.5	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platfo
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), e
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.21.0	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and T
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originall
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BS
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1

Table 162 – continued from previous page

Name	Version	Summary / License
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. /
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / M
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BS
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveStat
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. / LG
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC

Table 163 – continued from previou

Name	Version	Summary / License
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.6-
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD 3-
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / Ap
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and PyP
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writ
glob2	0.6	Version of the glob module that supports recursion via **, and can capture p
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langua
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.4	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.4	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.4	An OpenType text shaping engine. / MIT

Table 163 – continued from previou

Name	Version	Summary / License
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.19	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3-
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System pr
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GI
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause

Table 163 – continued from previou

Name	Version	Summary / License
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executable
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.15.4	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT

Table 163 – continued from previou

Name	Version	Summary / License
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platform
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause

Table 163 – continued from previou

Name	Version	Summary / License
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x. / I
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.1.0 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
_ipyw_jlab_nb_ext_conf	0.1.0	A configuration metapackage for enabling Anaconda-bundled jupyter extens
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.9	Anaconda Cloud command line client library / BSD 3-Clause
anaconda-navigator	1.7.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.2	Tool for encapsulating, running, and reproducing data science projects / BSI
asn1crypto	0.24.0	Python ASN.1 library with a focus on performance and a pythonic API / MI
astroid	1.6.1	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.3	Community-developed Python Library for Astronomy / BSD
attrs	17.4.0	attrs is the Python package that will bring back the joy of writing classes by
babel	2.5.3	Utilities to internationalize and localize Python applications / BSD 3-clause
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveStat
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / MI
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT

Table 164 – continued from previou

Name	Version	Summary / License
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.1.2	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.13	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.12	Cairo is a 2D graphics library with support for multiple output devices. / LG
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2018.1.18	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.11.4	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / BS
cloudpickle	0.5.2	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.4.10	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	3.4.1	tools for building conda packages / BSD 3-Clause
conda-env	2.6.0	Tools for interacting with conda environments. / BSD 3-Clause
conda-verify	2.0.0	tool for validating conda recipes and conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.6-
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.1.4	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.27.3	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.9.0	Cython implementation of Toolz. High performance functional utilities. / B
dask	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.16.1	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.12.2	Simple message bus system for applications to talk to one another / GPL2
decorator	4.2.1	Better living through Python with decorators. / BSD 3-Clause
distributed	1.20.2	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation and
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD 3-
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.5	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.13	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD 3
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / Ap
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and PyP
futures	3.2.0	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT

Table 164 – continued from previou

Name	Version	Summary / License
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications writ
glob2	0.6	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A "smart font" system that handles the complexities of lesser-known langua
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.4	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.4	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.1	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.7.4	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing data
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	1.0.1	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.19	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.8.0	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.1.1	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-Cla
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clause
jedi	0.11.1	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.10	An easy to use stand-alone template engine written in pure python. / 3-Clau
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD 3
jupyter_client	5.2.2	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.4.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.31.5	A pre-alpha version of a computational environment for Jupyter. / BSD 3-C
jupyterlab_launcher	0.10.2	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcurl	7.58.0	tool and library for transferring data with URL syntax / MIT/X derivate (htt
libedit	3.1	Editline Library (libedit) / NetBSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.34	PNG reference library. / zlib/libpng
libsodium	1.0.15	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	The GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.9	Support for the Tag Image File Format (TIFF). / HPND

Table 164 – continued from previou

Name	Version	Summary / License
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System pr
libxml2	2.9.7	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.32	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.21.0	A lightweight LLVM python binding for writing JIT compilers / New BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.1	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause, GI
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. / GP
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Clause
matplotlib	2.1.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.8.3	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high prec
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point compu
mpmath	1.0.0	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Clau
msgpack-python	0.5.1	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-clau
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.1	Python package for creating and manipulating complex networks / BSD 3-C
nltk	3.2.5	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.4.0	A web-based notebook environment for interactive computing / BSD 3-clau
numba	0.36.2	a just-in-time Python function compiler based on LLVM / BSD
numexpr	2.6.4	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.14.0	Array processing for numbers, strings, records, and objects. / BSD 3-Clause
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.45.1	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.10	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2n	OpenSSL is an open-source implementation of the SSL and TLS protocols
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.22.0	High-performance, easy-to-use data structures and data analysis tools. / BSI
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.41.0	Text layout and rendering engine. / LGPL-2.1
parso	0.1.1	A Python Parser / MIT License
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executable
path.py	10.5	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.5.0	Describing statistical models in Python using symbolic formulas / BSD-2-C
pcre	8.41	Regular expression pattern matching using the same syntax and semantics a
pep8	1.7.1	Python style guide checker / MIT
pexpect	4.3.1	Pexpect makes Python a better tool for controlling other applications. / ISC
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT

Table 164 – continued from previou

Name	Version	Summary / License
pillow	5.0.0	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
pluggy	0.6.0	Plugin registration and hook calling for Python / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD 3-
psutil	5.4.3	A cross-platform process and system utilities module for Python / BSD 3-C
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.5.2	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.15.4	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.3	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0.1	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.8.2	python code static checker / GPL
pyodbc	4.0.22	DB API Module for ODBC / MIT
pyopenssl	17.5.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-2
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks f
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts o
pytest	3.3.2	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.3	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.3	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.7	A python refactoring library... / GPL 2.0
ruamel_yaml	0.15.35	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.1	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-Cla
scipy	1.0.0	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.1	Statistical data visualization / BSD 3-Clause
send2trash	1.4.2	Python library to natively send files to Trash (or Recycle bin) on all platforn
setuptools	38.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), etc.
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0

Table 164 – continued from previou

Name	Version	Summary / License
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.9	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / Ap
sphinx	1.6.6	Sphinx is a tool that makes it easy to create intelligent and beautiful docume
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.6	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.2.1	Database Abstraction Library. / MIT
sqlite	3.22.0	Implements a self-contained, zero-configuration, SQL database engine. / Pu
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x. /
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.8.1	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and co
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk.
toolz	0.9.0	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.3	A Python web framework and asynchronous networking library, originally d
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / MI
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MIT
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.14.1	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.30.0	A built-package format for Python. / MIT
widgetsnbextension	3.1.0	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadshee
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and GP
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 (Oct 25, 2017)

- R has been updated to version 3.4.2. All R packages (including RStudio) have been rebuilt to be compatible with the new Anaconda 5.0 compilers.
- Updated many packages, including Python, Numpy, Spyder, Navigator, and Bokeh.
- The MKL library load path has been modified to address issue for Julia users.
- Fixed an OpenSSL issue with WSL on Windows.
- Fixed Anaconda Installer Configuration (AIC) feature for Unix installers.
- Re-enabled spaces in installation paths on Windows (temporarily disabled in 5.0.0).

Major package updates

- anaconda-navigator 1.6.8 -> 1.6.9
- bokeh 0.12.7 -> 0.12.10
- conda 4.3.27 -> 4.3.30
- conda-build 3.0.22 -> 3.0.27
- dask 0.15.2 -> 0.15.3
- matplotlib 2.0.2 -> 2.1.0
- numpy 1.13.1 -> 1.13.3
- python 2.7.13 -> 2.7.14
- python 3.6.2 -> 3.6.3
- scikit-learn 0.19.0 -> 0.19.1
- spyder 3.2.3 -> 3.2.4

Packages

Anaconda 5.0.1 for 64-bit Windows with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause

Table 165 – continued from previous page

Name	Version	Summary / License
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cachecontrol	0.12.3	httplib2 caching algorithms for use with requests / Apache Software Licen
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 165 – continued from previous page

Name	Version	Summary / License
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lockfile	0.12.2	Platform-independent file locking module / MIT
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.10	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD

Table 165 – continued from previous page

Name	Version	Summary / License
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.3	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause

Table 165 – continued from previous page

Name	Version	Summary / License
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docur
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause

Table 165 – continued from previous page

Name	Version	Summary / License
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 32-bit Windows with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cachecontrol	0.12.3	httplib2 caching algorithms for use with requests / Apache Software Licen
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause

Table 166 – continued from previous page

Name	Version	Summary / License
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD

Table 166 – continued from previous page

Name	Version	Summary / License
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lockfile	0.12.2	Platform-independent file locking module / MIT
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.10	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause

Table 166 – continued from previous page

Name	Version	Summary / License
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.3	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause

Table 166 – continued from previous page

Name	Version	Summary / License
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for macOS on Intel 64-bit with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT

Table 167 – continued from previous page

Name	Version	Summary / License
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT

Table 167 – continued from previous page

Name	Version	Summary / License
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0

Table 167 – continued from previous page

Name	Version	Summary / License
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks

Table 167 – continued from previous page

Name	Version	Summary / License
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.3	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause

Table 167 – continued from previous page

Name	Version	Summary / License
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 64-bit Linux on IBM Power CPUs with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.5.3	abstract syntax tree for Python with inference support / LGPL version 2.1
astropy	2.0.1	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
bkcharts	0.2	optional High Level charts API built on top of Bokeh / New BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.7	Python interactive visualization library for modern web browsers / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
cairo	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
certifi	2016.2.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.4	Universal character encoding detector / GNU Lesser General Public License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.4.0	extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
conda	4.3.27	Package management system and Environment management system / BSD
conda-build	3.0.22	Commands and tools for building conda packages / BSD 3-clause
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apache and BS
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD

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Table 168 – continued from previous page

Name	Version	Summary / License
cython	0.26	The Cython compiler for writing C extensions for the Python language / Apache vers
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.15.2	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
decorator	4.1.2	Better living through Python with decorators / BSD
distributed	1.18.1	Distributed computing / BSD 3-Clause
docutils	0.14	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
entrypoints	0.2.3	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	0.12.2	Microframework for Python based on Werkzeug, Jinja2. / BSD
flask-cors	3.0.3	Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based Python network library / MIT
glob2	0.5	Enhanced glob that can capture patterns and supports recursive wildcards / BSD Lice
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.9999999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.6	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.6.1	Provides a rich toolkit to help you make the most of using Python interactively / BSD
ipython	6.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.15	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg files / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	web-based notebook environment for interactive computing. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.2.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.3.1	Fast and thorough lazy object proxy / BSD
libffi	3.2.1	portable foreign-function interface library / MIT
libgfortran	3.0.0	the GNU Fortran compiler, part of GCC / GPL3
libiconv	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.30	official PNG reference library / libpng license
libsodium	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT

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Table 168 – continued from previous page

Name	Version	Summary / License
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	XML and HTML with Python / BSD
markupsafe	1.0	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	5.2.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.4.0	reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.4	Build Python programs to work with human language data / Apache Software Licens
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects / BSD
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.1	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License
openblas	0.2.19	An Optimized BLAS library / BSD
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.3	Powerful Python data analysis toolkit / BSD
pandocfilters	1.4.2	utilities for writing pandoc filters in python / BSD License
partd	0.3.8	Appendable key-value byte store / BSD
patchelf	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	10.3.1	An object representing a path to a file or directory / MIT
pathlib2	2.3.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.39	A set of functions that implement regular expression pattern matching / 3-clause BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.2.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation / MIT
pkginfo	1.4.1	query metadatdata from sdists or bdists installed packages / PSF
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.15	library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT License
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.18	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	passive checker of Python programs / MIT

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Table 168 – continued from previous page

Name	Version	Summary / License
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.7.2	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.2.0	Create and execute simple grammars / MIT
pytables	3.4.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.2.1	Simple and powerful testing with Python / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	extensions to the standard Python datetime module / Simplified BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
requests	2.14.2	Python HTTP for Humans / Apache Software License
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.19.0	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.1	Scientific Library for Python / BSD
seaborn	0.8	Statistical data visualization / BSD
setuptools	36.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.6.3	Documentation generator / BSD
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.1.13	Python SQL toolkit and Object Relational Mapper / MIT
sqlite	3.13.0	SQL database engine / Public-Domain
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library / BSD
terminado	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3.1	collection of utilities for Python code working with files and commands / MIT
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.2	Tornado Web Server / Apache 2.0
traitlets	4.3.2	Configuration system for Python applications / Modified BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.1.0	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD
xlwt	1.3.0	writing data and formatting information to Excel files / BSD

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Table 168 – continued from previous page

Name	Version	Summary / License
xz	5.2.3	Data compression software with high compression ratio / Public-Domain, GPL
yaml	0.1.6	YAML Ain't Markup Language / MIT
zeromq	4.1.5	Distributed messaging / LGPL
zict	0.1.2	Composable Mutable Mapping tools / BSD
zlib	1.2.11	Unobtrusive compression library / zlib

Anaconda 5.0.1 for 64-bit Linux with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. / I
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / I
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause

Table 169 – continued from previous page

Name	Version	Summary / License
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause

Table 169 – continued from previous page

Name	Version	Summary / License
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B

Table 169 – continued from previous page

Name	Version	Summary / License
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.3	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT

Table 169 – continued from previous page

Name	Version	Summary / License
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 32-bit Linux with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. / I
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / I
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD

Table 170 – continued from previous page

Name	Version	Summary / License
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception

Table 170 – continued from previous page

Name	Version	Summary / License
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT

Table 170 – continued from previous page

Name	Version	Summary / License
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.3	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A

Table 170 – continued from previous page

Name	Version	Summary / License
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD

Table 171 – continued from previous page

Name	Version	Summary / License
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cachecontrol	0.12.3	httplib2 caching algorithms for use with requests / Apache Software Licen
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py

Table 171 – continued from previous page

Name	Version	Summary / License
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lockfile	0.12.2	Platform-independent file locking module / MIT
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.10	cross platform menu item installation / BSD

Table 171 – continued from previous page

Name	Version	Summary / License
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
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pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT

Table 171 – continued from previous page

Name	Version	Summary / License
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M

Table 171 – continued from previous page

Name	Version	Summary / License
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cachecontrol	0.12.3	httplib2 caching algorithms for use with requests / Apache Software Licen

Table 172 – continued from previous page

Name	Version	Summary / License
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distlib	0.2.5	Distribution utilities / Python Software Foundation License
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can captur
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause

Table 172 – continued from previous page

Name	Version	Summary / License
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lockfile	0.12.2	Platform-independent file locking module / MIT
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.10	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD

Table 172 – continued from previous page

Name	Version	Summary / License
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
progress	1.3	Easy progress reporting for Python / ISC
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause

Table 172 – continued from previous page

Name	Version	Summary / License
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docur
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. / I
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause

Table 172 – continued from previous page

Name	Version	Summary / License
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / I
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa

Table 173 – continued from previous page

Name	Version	Summary / License
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause

Table 173 – continued from previous page

Name	Version	Summary / License
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1

Table 173 – continued from previous page

Name	Version	Summary / License
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyaudio	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MI
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT

Table 173 – continued from previous page

Name	Version	Summary / License
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docur
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. / I
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause

Table 173 – continued from previous page

Name	Version	Summary / License
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.5.3	abstract syntax tree for Python with inference support / LGPL version 2.1
astropy	2.0.1	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.5	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
bkcharts	0.2	optional High Level charts API built on top of Bokeh / New BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.7	Python interactive visualization library for modern web browsers / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
cairo	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
certifi	2016.2.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.4	Universal character encoding detector / GNU Lesser General Public License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.4.0	extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
conda	4.3.27	Package management system and Environment management system / BSD
conda-build	3.0.22	Commands and tools for building conda packages / BSD 3-clause
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apache and BS
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.26	The Cython compiler for writing C extensions for the Python language / Apache vers

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Table 174 – continued from previous page

Name	Version	Summary / License
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.15.2	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
decorator	4.1.2	Better living through Python with decorators / BSD
distributed	1.18.1	Distributed computing / BSD 3-Clause
docutils	0.14	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
entrypoints	0.2.3	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	0.12.2	Microframework for Python based on Werkzeug, Jinja2. / BSD
flask-cors	3.0.3	Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 and PyPy. / PSF
functools_lru_cache	1.4	backport of functools.lru_cache from Python 3.3 / MIT
futures	3.1.1	A Java-style futures package for Python / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based Python network library / MIT
glob2	0.5	Enhanced glob that can capture patterns and supports recursive wildcards / BSD Lice
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.9999999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.6	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / Python Software Foundation License
ipykernel	4.6.1	Provides a rich toolkit to help you make the most of using Python interactively / BSD
ipython	5.3.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.15	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg files / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	web-based notebook environment for interactive computing. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.2.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.3.1	Fast and thorough lazy object proxy / BSD
libffi	3.2.1	portable foreign-function interface library / MIT

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Table 174 – continued from previous page

Name	Version	Summary / License
libgfortran	3.0.0	the GNU Fortran compiler, part of GCC / GPL3
libiconv	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.30	official PNG reference library / libpng license
libsodium	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	XML and HTML with Python / BSD
markupsafe	1.0	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	5.2.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.4.0	reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.4	Build Python programs to work with human language data / Apache Software Licens
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects / BSD
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.1	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License
openblas	0.2.19	An Optimized BLAS library / BSD
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.3	Powerful Python data analysis toolkit / BSD
pandocfilters	1.4.2	utilities for writing pandoc filters in python / BSD License
partd	0.3.8	Appendable key-value byte store / BSD
patchelf	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	10.3.1	An object representing a path to a file or directory / MIT
pathlib2	2.3.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.39	A set of functions that implement regular expression pattern matching / 3-clause BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.2.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation / MIT
pkginfo	1.4.1	query metadatdata from sdists or bdists installed packages / PSF
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.15	library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	Library with cross-python path, ini-parsing, io, code, log facilities / MIT

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Table 174 – continued from previous page

Name	Version	Summary / License
pycairo	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT License
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.18	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	passive checker of Python programs / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.7.2	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.2.0	Create and execute simple grammars / MIT
pytables	3.4.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.2.1	Simple and powerful testing with Python / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	extensions to the standard Python datetime module / Simplified BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
requests	2.14.2	Python HTTP for Humans / Apache Software License
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD License
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.19.0	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.1	Scientific Library for Python / BSD
seaborn	0.8	Statistical data visualization / BSD
setuptools	36.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.6.3	Documentation generator / BSD
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.1.13	Python SQL toolkit and Object Relational Mapper / MIT
sqlite	3.13.0	SQL database engine / Public-Domain
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
subprocess32	3.2.7	backport of the subprocess module from Python 3.2/3.3 for use on 2.x / Python Softw
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library / BSD
terminado	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3.1	collection of utilities for Python code working with files and commands / MIT
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.2	Tornado Web Server / Apache 2.0
traitlets	4.3.2	Configuration system for Python applications / Modified BSD

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Table 174 – continued from previous page

Name	Version	Summary / License
typing	3.6.2	backport of the standard library typing module to Python versions older than 3.6 / PS
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.1.0	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD
xlwt	1.3.0	writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / Public-Domain, GPL
yaml	0.1.6	YAML Ain't Markup Language / MIT
zeromq	4.1.5	Distributed messaging / LGPL
zict	0.1.2	Composable Mutable Mapping tools / BSD
zlib	1.2.11	Unobtrusive compression library / zlib

Anaconda 5.0.1 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. / I
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC

Table 175 – continued from previous page

Name	Version	Summary / License
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause

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Name	Version	Summary / License
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr

Table 175 – continued from previous page

Name	Version	Summary / License
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT

Table 175 – continued from previous page

Name	Version	Summary / License
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk

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Name	Version	Summary / License
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.1 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.9	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.10	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2

Table 176 – continued from previous page

Name	Version	Summary / License
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.30	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.27	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.3	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.19.1	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A "smart font" system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2

Table 176 – continued from previous page

Name	Version	Summary / License
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Clau
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	4.1.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.1.0	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT

Table 176 – continued from previous page

Name	Version	Summary / License
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	2.0	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.3	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.4.0	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT

Table 176 – continued from previous page

Name	Version	Summary / License
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.4	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.14	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.6	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.1	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.11.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD

Table 176 – continued from previous page

Name	Version	Summary / License
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	1.0.2	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.3	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0.1 (Oct 02, 2017)

- Fixes Python & C compiler fallback path for all cases on x86/x86_64 Linux. Without this fix, people were required to use our new compilers, which is not something we want to enforce at this time. This was affecting travis-ci builds and pip installs of packages that require compilation for extensions.

Anaconda 5.0.0 (Sep 26, 2017)

- Over 100 packages updated and added. MKL is updated to 2018.0.0. JupyterLab alpha preview 0.27.0 is included.
- All new compilers on macOS and Linux, giving substantial security and performance improvements.
- Where possible, all build recipes use conda-forge as a base, using https://github.com/AnacondaRecipes .
- A new channel, `pkgs/main`, has been added to `defaults`. The new channel is given top priority within `defaults` and holds packages built with the new compiler stack.
- Continuum Analytics has been renamed to Anaconda, Inc. See this blog post for more.
- Spaces are no longer allowed in the installation path on Windows.
- Transitioned to more flexible dependency pinning of numpy packages, giving wider ranges of compatibility.

Major package updates

- anaconda-client 1.6.3 -> 1.6.5
- anaconda-navigator 1.6.2 -> 1.6.8
- anaconda-project 0.6.0 -> 0.8.0
- bokeh 0.12.5 -> 0.12.7
- conda 4.3.21 -> 4.3.27
- dask 0.14.3 -> 0.15.2
- jupyter_client 5.0.1 -> 5.1.0
- jupyter_console 5.1.0 -> 5.2.0
- numba 0.33.0 -> 0.35.0
- numpy 1.12.1 -> 1.13.1
- pandas 0.20.1 -> 0.20.3
- pillow 4.1.1 -> 4.2.1
- requests 2.14.2 -> 2.18.4
- scikit-learn 0.18.1 -> 0.19.0
- scipy 0.19.0 -> 0.19.1
- seaborn 0.7.1 -> 0.8.0
- spyder 3.1.4 -> 3.2.3
- sympy 1.0 -> 1.1.1
- conda-build 3.0.22
- jupyterlab 0.27.0
- jupyterlab_launcher 0.4.0

Packages

Anaconda 5.0.0 for 64-bit Windows with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT

Table 177 – continued from previous page

Name	Version	Summary / License
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 177 – continued from previous page

Name	Version	Summary / License
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.8	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau

Table 177 – continued from previous page

Name	Version	Summary / License
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0

Table 177 – continued from previous page

Name	Version	Summary / License
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docur
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. / I
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 32-bit Windows with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT

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Name	Version	Summary / License
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
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ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
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itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
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jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
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jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
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matplotlib	2.0.2	Publication quality figures in Python / PSF-based
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mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl

Table 178 – continued from previous page

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msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
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numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
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pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
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pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.2	General purpose programming language / PSF

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python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
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qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
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scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
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singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	14	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v

Table 178 – continued from previous page

Name	Version	Summary / License
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for macOS on Intel 64-bit with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa

Table 179 – continued from previous page

Name	Version	Summary / License
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause

Table 179 – continued from previous page

Name	Version	Summary / License
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0

Table 179 – continued from previous page

Name	Version	Summary / License
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause

Table 179 – continued from previous page

Name	Version	Summary / License
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docur
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. / I
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 64-bit Linux on IBM Power CPUs with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.5.3	abstract syntax tree for Python with inference support / LGPL version 2.1
astropy	2.0.1	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
bkcharts	0.2	optional High Level charts API built on top of Bokeh / New BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.7	Python interactive visualization library for modern web browsers / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
cairo	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
certifi	2016.2.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.4	Universal character encoding detector / GNU Lesser General Public License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.4.0	extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
conda	4.3.27	Package management system and Environment management system / BSD
conda-build	3.0.22	Commands and tools for building conda packages / BSD 3-clause
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apache and BS
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.26	The Cython compiler for writing C extensions for the Python language / Apache vers
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.15.2	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
decorator	4.1.2	Better living through Python with decorators / BSD
distributed	1.18.1	Distributed computing / BSD 3-Clause
docutils	0.14	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
entrypoints	0.2.3	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	0.12.2	Microframework for Python based on Werkzeug, Jinja2. / BSD
flask-cors	3.0.3	Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based Python network library / MIT
glob2	0.5	Enhanced glob that can capture patterns and supports recursive wildcards / BSD Lice
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT

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Table 180 – continued from previous page

Name	Version	Summary / License
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.9999999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.6	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.6.1	Provides a rich toolkit to help you make the most of using Python interactively / BSD
ipython	6.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.15	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg files / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	web-based notebook environment for interactive computing. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.2.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.3.1	Fast and thorough lazy object proxy / BSD
libffi	3.2.1	portable foreign-function interface library / MIT
libgfortran	3.0.0	the GNU Fortran compiler, part of GCC / GPL3
libiconv	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.30	official PNG reference library / libpng license
libsodium	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	XML and HTML with Python / BSD
markupsafe	1.0	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	5.2.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.4.0	reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.4	Build Python programs to work with human language data / Apache Software Licens
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects / BSD
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.1	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License

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Name	Version	Summary / License
openblas	0.2.19	An Optimized BLAS library / BSD
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.3	Powerful Python data analysis toolkit / BSD
pandocfilters	1.4.2	utilities for writing pandoc filters in python / BSD License
partd	0.3.8	Appendable key-value byte store / BSD
patchelf	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	10.3.1	An object representing a path to a file or directory / MIT
pathlib2	2.3.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.39	A set of functions that implement regular expression pattern matching / 3-clause BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.2.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation / MIT
pkginfo	1.4.1	query metadatdata from sdists or bdists installed packages / PSF
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.15	library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT License
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.18	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	passive checker of Python programs / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.7.2	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.2.0	Create and execute simple grammars / MIT
pytables	3.4.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.2.1	Simple and powerful testing with Python / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	extensions to the standard Python datetime module / Simplified BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
requests	2.14.2	Python HTTP for Humans / Apache Software License
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.19.0	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.1	Scientific Library for Python / BSD
seaborn	0.8	Statistical data visualization / BSD
setuptools	36.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT

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Name	Version	Summary / License
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.6.3	Documentation generator / BSD
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.1.13	Python SQL toolkit and Object Relational Mapper / MIT
sqlite	3.13.0	SQL database engine / Public-Domain
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library / BSD
terminado	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3.1	collection of utilities for Python code working with files and commands / MIT
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.2	Tornado Web Server / Apache 2.0
traitlets	4.3.2	Configuration system for Python applications / Modified BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.1.0	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD
xlwt	1.3.0	writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / Public-Domain, GPL
yaml	0.1.6	YAML Ain't Markup Language / MIT
zeromq	4.1.5	Distributed messaging / LGPL
zict	0.1.2	Composable Mutable Mapping tools / BSD
zlib	1.2.11	Unobtrusive compression library / zlib

Anaconda 5.0.0 for 64-bit Linux with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD

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Name	Version	Summary / License
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3

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Name	Version	Summary / License
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /

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Name	Version	Summary / License
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT

Table 181 – continued from previous page

Name	Version	Summary / License
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause

Table 181 – continued from previous page

Name	Version	Summary / License
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 32-bit Linux with Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause

Table 182 – continued from previous page

Name	Version	Summary / License
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A "smart font" system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like

Table 182 – continued from previous page

Name	Version	Summary / License
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	6.1.0	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause

Table 182 – continued from previous page

Name	Version	Summary / License
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cl
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cl
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT

Table 182 – continued from previous page

Name	Version	Summary / License
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	3.6.2	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI

Table 182 – continued from previous page

Name	Version	Summary / License
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 64-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / I
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause

Table 183 – continued from previous page

Name	Version	Summary / License
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT

Table 183 – continued from previous page

Name	Version	Summary / License
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.8	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0

Table 183 – continued from previous page

Name	Version	Summary / License
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et

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Name	Version	Summary / License
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 32-bit Windows with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
bzip2	1.0.6	high-quality data compressor / bzip2
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
comtypes	1.1.2	pure Python COM package / MIT
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
console_shortcut	0.1.1	Console shortcut creator for Windows (using menuinst) / BSD
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD

Table 184 – continued from previous page

Name	Version	Summary / License
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icc_rt	2017.0.4	Intel runtime libraries for C, C++ and Fortran compilers / Intel proprietary
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD

Table 184 – continued from previous page

Name	Version	Summary / License
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
menuinst	1.4.8	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pep8	1.7.0	Python style guide checker / MIT
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT

Table 184 – continued from previous page

Name	Version	Summary / License
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pywin32	221	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause

Table 184 – continued from previous page

Name	Version	Summary / License
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
vc	9	A meta-package to track VC features. / Modified BSD License (3-clause)
vs2008_runtime	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
win_inet_pton	1.0.1	Native inet_pton and inet_ntop implementation for Python on Windows (v
win_unicode_console	0.5	A Python package to enable Unicode input and display when running Pyth
wincertstore	0.2	Python module to extract CA and CRL certs from Windows' cert store (ct
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for macOS on Intel 64-bit with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
appnope	0.1.0	Disable App Nap on OS X 10.9 / BSD 2-Clause
appscript	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause

Table 185 – continued from previous page

Name	Version	Summary / License
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gettext	0.19.8.1	Internationalization package. / GPLv2
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause

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Name	Version	Summary / License
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libcxx	4.0.1	C++ Standard Library / MIT license or UIUC License
libcxxabi	4.0.1	C++ Standard Library Support / MIT license or UIUC License
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgfortran	3.0.1	Fortran libraries from the GNU Compiler Collection / GPL 3 (with GCC
libiconv	1.15	Provides iconv for systems which don't have one (or that cannot convert fr
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD

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Name	Version	Summary / License
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyaudio	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL

Table 185 – continued from previous page

Name	Version	Summary / License
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
python.app	2	Proxy on OS X letting Python libraries hook into the gui event loop / BSD
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause

Table 185 – continued from previous page

Name	Version	Summary / License
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwings	0.11.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 64-bit Linux on IBM Power CPUs with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.5.3	abstract syntax tree for Python with inference support / LGPL version 2.1
astropy	2.0.1	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.5	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
bkcharts	0.2	optional High Level charts API built on top of Bokeh / New BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.7	Python interactive visualization library for modern web browsers / BSD
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
cairo	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
certifi	2016.2.28	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.4	Universal character encoding detector / GNU Lesser General Public License

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Table 186 – continued from previous page

Name	Version	Summary / License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.4.0	extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
conda	4.3.27	Package management system and Environment management system / BSD
conda-build	3.0.22	Commands and tools for building conda packages / BSD 3-clause
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apache and BS
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.26	The Cython compiler for writing C extensions for the Python language / Apache vers
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.15.2	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
decorator	4.1.2	Better living through Python with decorators / BSD
distributed	1.18.1	Distributed computing / BSD 3-Clause
docutils	0.14	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
entrypoints	0.2.3	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.7	A platform independent file lock. / Public Domain
flask	0.12.2	Microframework for Python based on Werkzeug, Jinja2. / BSD
flask-cors	3.0.3	Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 and PyPy. / PSF
functools_lru_cache	1.4	backport of functools.lru_cache from Python 3.3 / MIT
futures	3.1.1	A Java-style futures package for Python / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based Python network library / MIT
glob2	0.5	Enhanced glob that can capture patterns and supports recursive wildcards / BSD Lice
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.9999999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.6	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / Python Software Foundation License
ipykernel	4.6.1	Provides a rich toolkit to help you make the most of using Python interactively / BSD
ipython	5.3.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.15	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD

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Table 186 – continued from previous page

Name	Version	Summary / License
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg files / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	web-based notebook environment for interactive computing. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.2.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.3.1	Fast and thorough lazy object proxy / BSD
libffi	3.2.1	portable foreign-function interface library / MIT
libgfortran	3.0.0	the GNU Fortran compiler, part of GCC / GPL3
libiconv	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.30	official PNG reference library / libpng license
libsodium	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	XML and HTML with Python / BSD
markupsafe	1.0	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	5.2.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.4.0	reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.4	Build Python programs to work with human language data / Apache Software Licens
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects / BSD
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.1	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License
openblas	0.2.19	An Optimized BLAS library / BSD
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.3	Powerful Python data analysis toolkit / BSD
pandocfilters	1.4.2	utilities for writing pandoc filters in python / BSD License
partd	0.3.8	Appendable key-value byte store / BSD
patchelf	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	10.3.1	An object representing a path to a file or directory / MIT
pathlib2	2.3.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre	8.39	A set of functions that implement regular expression pattern matching / 3-clause BSD

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Table 186 – continued from previous page

Name	Version	Summary / License
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.2.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation / MIT
pkginfo	1.4.1	query metadatdata from sdists or bdists installed packages / PSF
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.15	library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT License
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.18	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.6.0	passive checker of Python programs / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.7.2	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.2.0	Create and execute simple grammars / MIT
pytables	3.4.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.2.1	Simple and powerful testing with Python / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	extensions to the standard Python datetime module / Simplified BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
requests	2.14.2	Python HTTP for Humans / Apache Software License
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD License
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.19.0	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.1	Scientific Library for Python / BSD
seaborn	0.8	Statistical data visualization / BSD
setuptools	36.4.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.6.3	Documentation generator / BSD
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
sqlalchemy	1.1.13	Python SQL toolkit and Object Relational Mapper / MIT

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Table 186 – continued from previous page

Name	Version	Summary / License
sqlite	3.13.0	SQL database engine / Public-Domain
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
subprocess32	3.2.7	backport of the subprocess module from Python 3.2/3.3 for use on 2.x / Python Softw
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library / BSD
terminado	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3.1	collection of utilities for Python code working with files and commands / MIT
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.2	Tornado Web Server / Apache 2.0
traitlets	4.3.2	Configuration system for Python applications / Modified BSD
typing	3.6.2	backport of the standard library typing module to Python versions older than 3.6 / PS
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.1.0	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD
xlwt	1.3.0	writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / Public-Domain, GPL
yaml	0.1.6	YAML Ain't Markup Language / MIT
zeromq	4.1.5	Distributed messaging / LGPL
zict	0.1.2	Composable Mutable Mapping tools / BSD
zlib	1.2.11	Unobtrusive compression library / zlib

Anaconda 5.0.0 for 64-bit Linux with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT

Table 187 – continued from previous page

Name	Version	Summary / License
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. /
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. /
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture

Table 187 – continued from previous page

Name	Version	Summary / License
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT

Table 187 – continued from previous page

Name	Version	Summary / License
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.19.2.1	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny ‘shelve’-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause

Table 187 – continued from previous page

Name	Version	Summary / License
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause

Table 187 – continued from previous page

Name	Version	Summary / License
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 5.0.0 for 32-bit Linux with Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme. / BSD 3-Clause
anaconda-client	1.6.5	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.8	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.8.0	Reproducible, executable project directories. / BSD 3-Clause
asn1crypto	0.22.0	Python ASN.1 library with a focus on performance and a pythonic API / M
astroid	1.5.3	A abstract syntax tree for Python with inference support. / LGPL 2.1
astropy	2.0.2	Community-developed Python Library for Astronomy / BSD
babel	2.5.0	Utilities to internationalize and localize Python applications / BSD 3-clau
backports	1.0	/ BSD
backports.functools_lru_cache	1.4	Backport of functools.lru_cache from Python 3.3 as published at ActiveSt

Table 188 – continued from previous page

Name	Version	Summary / License
backports.shutil_get_terminal_size	1.0.0	A backport of the get_terminal_size function from Python 3.3's shutil. / M
backports_abc	0.5	A backport of recent additions to the *collections.abc* module. / PSF 2
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
bkcharts	0.2	High level chart types built on top of Bokeh / BSD 3-Clause
blaze	0.11.3	NumPy and Pandas interface to big data / BSD 3-Clause
bleach	2.0.0	Easy, whitelist-based HTML-sanitizing tool / Apache-2.0
bokeh	0.12.7	Statistical and novel interactive HTML plots for Python / BSD 3-Clause
boto	2.48.0	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / BSD 2-Clause
ca-certificates	2017.08.26	Certificates for use with other packages. / ISC
cairo	1.14.10	Cairo is a 2D graphics library with support for multiple output devices. / I
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD 2-Clause
certifi	2017.7.27.1	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.10.0	Foreign Function Interface for Python calling C code. / MIT
chardet	3.0.4	Universal character encoding detector / LGPL2
click	6.7	A simple wrapper around optparse for powerful command line utilities. / I
cloudpickle	0.4.0	Extended pickling support for Python objects / BSD 3-Clause
clyent	1.2.2	Command line client library for windows and posix / BSD 3-Clause
colorama	0.3.9	Cross-platform colored terminal text. / BSD 3-Clause
conda	4.3.27	OS-agnostic, system-level binary package and environment manager. / BS
conda-build	3.0.22	tools for building conda packages / BSD 3-Clause
configparser	3.5.0	This library brings the updated configparser from Python 3.5 to Python 2.
contextlib2	0.5.5	Backports and enhancements for the contextlib module / PSF
cryptography	2.0.3	Provides cryptographic recipes and primitives to Python developers / Apa
curl	7.55.1	tool and library for transferring data with URL syntax / MIT/X derivate (h
cycler	0.10.0	Composable style cycles. / BSD 3-Clause
cython	0.26.1	The Cython compiler for writing C extensions for the Python language / A
cytoolz	0.8.2	Cython implementation of Toolz. High performance functional utilities. /
dask	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
dask-core	0.15.2	Parallel Python with task scheduling / BSD 3-Clause
datashape	0.5.4	A data description language. / BSD 2-Clause
dbus	1.10.22	Simple message bus system for applications to talk to one another / GPL2
decorator	4.1.2	Better living through Python with decorators. / BSD 3-Clause
distributed	1.18.3	Distributed computing with Dask / BSD 3-Clause
docutils	0.14	Docutils – Python Documentation Utilities / Public Domain Dedictation a
entrypoints	0.2.3	Discover and load entry points from installed packages. / MIT License
enum34	1.1.6	Python 3.4 Enum backported to 3.3, 3.2, 3.1, 2.7, 2.6, 2.5, and 2.4 / BSD 2
et_xmlfile	1.0.1	An implementation of lxml.xmlfile for the standard library / MIT
expat	2.2.4	Expat XML parser library in C. / MIT
fastcache	1.0.2	C implementation of Python 3 lru_cache / MIT
filelock	2.0.12	A platform independent file lock. / Public Domain
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions. / BSD
flask-cors	3.0.3	A Flask extension adding a decorator for CORS support / MIT
fontconfig	2.12.4	A library for configuring and customizing font access. / MIT
freetype	2.8	A Free, High-Quality, and Portable Font Engine / GPL-2.0 and FreeType
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+. / A
functools32	3.2.3.2	Backport of the functools module from Python 3.2.3 for use on 2.7 and Py
futures	3.1.1	Backport of the concurrent.futures package from Python 3.2 / PSF
get_terminal_size	1.0.0	Get the size of the terminal window. / MIT

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Name	Version	Summary / License
gevent	1.2.2	Coroutine-based network library / MIT
glib	2.53.6	Provides core application building blocks for libraries and applications wr
glob2	0.5	Version of the glob module that supports recursion via **, and can capture
gmp	6.1.2	The GNU multiprecision library. / GPL 2 and LGPL 3
gmpy2	2.0.8	GMP/MPIR, MPFR, and MPC interface to Python 2.6+ and 3.x / LGPL 3
graphite2	1.3.10	A “smart font” system that handles the complexities of lesser-known langu
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD 3-Clause
gst-plugins-base	1.12.2	GStreamer Base Plug-ins / GPL2
gstreamer	1.12.2	Library for constructing graphs of media-handling components / LGPL 2
h5py	2.7.0	Read and write HDF5 files from Python. / BSD 3-Clause
harfbuzz	1.5.0	An OpenType text shaping engine. / MIT
hdf5	1.10.1	HDF5 is a data model, library, and file format for storing and managing da
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD 3-Clause
html5lib	0.999999999	HTML parser based on the WHATWG HTML specification / MIT
icu	58.2	International Components for Unicode. / MIT
idna	2.6	Internationalized Domain Names in Applications (IDNA). / BSD Like
imageio	2.2.0	a Python library for reading and writing image data / BSD 2-Clause
imagesize	0.7.1	Getting image size from png/jpeg/jpeg2000/gif file / MIT
intel-openmp	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
ipaddress	1.0.18	IPv4/IPv6 manipulation library / PSF 2
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD 3-clause
ipython	5.4.1	IPython: Productive Interactive Computing / BSD 3-clause
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD 3-Clause
ipywidgets	7.0.0	Jupyter Interactive Widgets / BSD 3-clause
isort	4.2.15	A Python utility / library to sort Python imports. / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments. / BSD 3-C
jbig	2.1	Implementation of the JBIG1 data compression standard / GPL-2.0
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD 2-Claus
jedi	0.10.2	An autocompletion tool for Python that can be used for text editors. / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / 3-Cl
jpeg	9b	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage. Install all the Jupyter components in one go. / BSD
jupyter_client	5.1.0	Jupyter protocol implementation and client libraries / BSD 3-clause
jupyter_console	5.2.0	Jupyter terminal console / BSD 3-Clause
jupyter_core	4.3.0	Core common functionality of Jupyter projects. / BSD 3-clause
jupyterlab	0.27.0	A pre-alpha version of a computational environment for Jupyter. / BSD 3-
jupyterlab_launcher	0.4.0	A Launcher for JupyterLab based applications. / BSD 3-Clause
lazy-object-proxy	1.3.1	A fast and thorough lazy object proxy. / BSD 2-Clause
libedit	3.1	Editline Library (libedit) / 3-Clause BSD
libffi	3.2.1	A Portable Foreign Function Interface Library. / Custom
libgcc-ng	7.2.0	The GCC low-level runtime library / GPL
libgfortran-ng	7.2.0	The GNU Fortran Runtime Library / GPL
libpng	1.6.32	PNG reference library. / zlib/libpng
libsodium	1.0.13	A modern and easy-to-use crypto library. / ISC
libssh2	1.8.0	the SSH library / BSD 3-Clause
libstdcxx-ng	7.2.0	he GNU C++ Runtime Library / GPL3 with runtime exception
libtiff	4.0.8	Support for the Tag Image File Format (TIFF). / HPND
libtool	2.4.6	The GNU Portable Library Tool / GPL 3

Table 188 – continued from previous page

Name	Version	Summary / License
libxcb	1.12	This is the C-language Binding (XCB) package to the X Window System
libxml2	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.20.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File-based locks for Python for Linux and Windows / BSD 2-Clause
lxml	3.8.0	Pythonic binding for the C libraries libxml2 and libxslt. / BSD 3-Clause,
lzo	2.10	LZO is a portable lossless data compression library written in ANSI C. /
markupsafe	1.0	A Python module that implements the jinja2.Markup string / BSD 3-Claus
matplotlib	2.0.2	Publication quality figures in Python / PSF-based
mccabe	0.6.1	McCabe complexity checker for Python / MIT
mistune	0.7.4	The fastest markdown parser in pure Python. / BSD 3-Clause
mkl	2018.0.0	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpc	1.0.3	A C library for the arithmetic of complex numbers with arbitrarily high pr
mpfr	3.1.5	The MPFR library is a C library for multiple-precision floating-point com
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD 3-Cl
msgpack-python	0.4.8	MessagePack (de)serializer. / Apache 2.0
multipledispatch	0.4.9	Multiple dispatch in Python / BSD 3-Clause
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.3.1	Converting Jupyter Notebooks / BSD 3-Clause
nbformat	4.4.0	The reference implementation of the Jupyter Notebook format / BSD 3-cla
ncurses	6.0	Library for text-based user interfaces / Free software (MIT-like)
networkx	1.11	Python package for creating and manipulating complex networks / BSD 3-
nltk	3.2.4	Build Python programs to work with human language data / Apache 2.0
nose	1.3.7	Nose extends unittest to make testing easier / LGPL-2.1
notebook	5.0.0	A web-based notebook environment for interactive computing / BSD 3-cla
numba	0.35.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy. / MIT
numpy	1.13.1	Array processing for numbers, strings, records, and objects. / BSD 3-Clau
numpydoc	0.7.0	Sphinx extension to support docstrings in Numpy format / BSD 3-Clause
odo	0.5.1	Data migration in Python / BSD-3-Clause
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License 2-Clause
openpyxl	2.4.8	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocol
packaging	16.8	Core utilities for Python packages / Apache 2.0 or BSD 2-Clause
pandas	0.20.3	High-performance, easy-to-use data structures and data analysis tools. / B
pandoc	1.15.0.6	Universal markup converter (repackaged binaries). / GPL-2.0
pandocfilters	1.4.2	A python module for writing pandoc filters / BSD-3-Clause
pango	1.40.11	Text layout and rendering engine. / LGPL-2.1
partd	0.3.8	Data structure for on-disk shuffle operations / BSD 3-Clause
patchelf	0.9	A small utility to modify the dynamic linker and RPATH of ELF executab
path.py	10.3.1	A module wrapper for os.path / MIT
pathlib2	2.3.0	Fork of pathlib aiming to support the full stdlib Python API. / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD-2-
pcre	8.41	Regular expression pattern matching using the same syntax and semantics
pep8	1.7.0	Python style guide checker / MIT
pexpect	4.2.1	Pexpect makes Python a better tool for controlling other applications. / IS
pickleshare	0.7.4	Tiny 'shelve'-like database with concurrency support / MIT
pillow	4.2.1	Pillow is the friendly PIL fork by Alex Clark and Contributors. / PIL
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT

Table 188 – continued from previous page

Name	Version	Summary / License
pixman	0.34.0	A low-level software library for pixel manipulation. / MIT
pkginfo	1.4.1	Query metadatdata from sdists / bdists / installed packages. / MIT
ply	3.10	Python Lex-Yacc / BSD 3-clause
prompt_toolkit	1.0.15	Library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	A cross-platform process and system utilities module for Python / BSD 3-
ptyprocess	0.5.2	Run a subprocess in a pseudo terminal / ISC
py	1.4.34	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycairo	1.13.3	Python bindings for the Cairo graphics library. / LGPL 2.1, MPL 1.1
pycodestyle	2.3.1	Python style guide checker / MIT
pycosat	0.6.2	Bindings to picosat (a SAT solver) / MIT
pycparser	2.18	Complete C99 parser in pure Python / BSD 3-clause
pycrypto	2.6.1	Cryptographic modules for Python. / Public Domain
pycurl	7.43.0	A Python Interface To The cURL library / LGPL, MIT
pyflakes	1.5.0	Pyflakes analyzes programs and detects various errors. / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD 2-clause
pylint	1.7.2	python code static checker / GPL
pyodbc	4.0.17	DB API Module for ODBC / MIT
pyopenssl	17.2.0	Python wrapper module around the OpenSSL library / Apache 2.0
pyparsing	2.2.0	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt. / Commercial, GPL-
pysocks	1.6.7	A Python SOCKS client module. See https://github.com/Anorov/PySocks
pytables	3.4.2	Brings together Python, HDF5 and NumPy to easily handle large amounts
pytest	3.2.1	Simple and powerful testing with Python. / MIT
python	2.7.13	General purpose programming language / PSF
python-dateutil	2.6.1	Extensions to the standard Python datetime module. / BSD 3-clause
pytz	2017.2	World timezone definitions, modern and historical. / MIT
pywavelets	0.5.2	Discrete Wavelet Transforms in Python. / MIT
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	Python bindings for zeromq / BSD 3-clause
qt	5.6.2	Qt is a cross-platform application and UI framework. / LGPL-3.0
qtawesome	0.4.4	Iconic fonts in PyQt and PySide applications / MIT
qtconsole	4.3.1	Jupyter Qt console / BSD 3-Clause
qtpy	1.3.1	Abstraction layer for PyQt5/PyQt4/PySide / MIT
readline	7.0	library for editing command lines as they are typed in / GPL3
requests	2.18.4	Python HTTP for Humans. / Apache 2.0
rope	0.10.5	A python refactoring library... / GPL 2.0
ruamel_yaml	0.11.14	A patched copy of ruamel.yaml. / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD 3-Clause
scikit-image	0.13.0	Image processing routines for SciPy. / BSD 3-Clause
scikit-learn	0.19.0	A set of python modules for machine learning and data mining / BSD 3-C
scipy	0.19.1	Scientific Library for Python / BSD 3-Clause
seaborn	0.8.0	Statistical data visualization / BSD 3-Clause
setuptools	36.5.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Simple generic functions (similar to Python's own len(), pickle.dump(), et
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18.1	Create Python bindings for C and C++ libraries / GPL-3.0
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD-2-Clause
sortedcollections	0.5.3	Python Sorted Collections / Apache-2.0
sortedcontainers	1.5.7	Python Sorted Container Types: SortedList, SortedDict, and SortedSet / A

Table 188 – continued from previous page

Name	Version	Summary / License
sphinx	1.6.3	Sphinx is a tool that makes it easy to create intelligent and beautiful docu
sphinxcontrib	1.0	Python namespace for sphinxcontrib / BSD
sphinxcontrib-websupport	1.0.1	Sphinx API for Web Apps / BSD-2-Clause
spyder	3.2.3	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.13	Database Abstraction Library. / MIT
sqlite	3.20.1	Implements a self-contained, zero-configuration, SQL database engine. /
ssl_match_hostname	3.5.0.1	The ssl.match_hostname() function from Python 3.5 / PSF 2
statsmodels	0.8.0	Statistical computations and models for use with SciPy / BSD 3-Clause
subprocess32	3.2.7	A backport of the subprocess module from Python 3.2/3.3 for use on 2.x.
sympy	1.1.1	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback serialization library. / BSD 2-Clause
terminado	0.6	Terminals served by tornado websockets / BSD 3-clause
testpath	0.3.1	Testpath is a collection of utilities for Python code working with files and
tk	8.6.7	A dynamic programming language with GUI support. Bundles Tcl and Tk
toolz	0.8.2	A functional standard library for Python. / BSD 3-Clause
tornado	4.5.2	A Python web framework and asynchronous networking library, originally
traitlets	4.3.2	Configuration system for Python applications / BSD 3-clause
typing	3.6.2	Type Hints for Python - backport for Python<3.5 / PSF
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSI
unixodbc	2.3.4	ODBC on non MS Windows platforms / LGPL-2.1
urllib3	1.22	HTTP library with thread-safe connection pooling, file post, and more. / M
wcwidth	0.1.7	Measures number of Terminal column cells of wide-character codes. / MI
webencodings	0.5.1	Character encoding aliases for legacy web content / BSD 3-Clause
werkzeug	0.12.2	The Python WSGI Utility Library. / BSD 3-Clause
wheel	0.29.0	A built-package format for Python. / MIT
widgetsnbextension	3.0.2	IPython HTML widgets for Jupyter / BSD 3-clause
wrapt	1.10.11	Module for decorators, wrappers and monkey patching. / BSD 2-Clause
xlrd	1.1.0	Library for developers to extract data from Microsoft Excel (tm) spreadsh
xlsxwriter	0.9.8	A Python module for creating Excel XLSX files / BSD 2-Clause
xlwt	1.3.0	Writing data and formatting information to Excel files / BSD
xz	5.2.3	Data compression software with high compression ratio / LGPL-2.1 and G
yaml	0.1.7	A C library for parsing and emitting YAML. / MIT
zeromq	4.2.2	A high-performance asynchronous messaging library. / LGPL 3
zict	0.1.2	Composable Dictionary Classes / BSD 3-Clause
zlib	1.2.11	Massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 4.4.0 (May 31, 2017)

Anaconda 4.4 was released on May 31, 2017 and includes the following:

- Support added for the "ppc64le" machine type, for the POWER8 LE architecture used by IBM Power Systems and OpenPOWER servers.
- On Windows, the PATH environment variable is no longer changed by default, as this can cause trouble with other software. Instead, use Anaconda Navigator or the Anaconda Prompt in the Start Menu under "Anaconda" to use Anaconda software. If a user does choose to change the PATH variable, Anaconda is no longer appended to the PATH in system mode, and is now always added to the front of PATH in either system mode or user mode.
- Python 3.5 is updated from 3.5.2 to 3.5.3 and Python 3.6 from 3.6.0 to 3.6.1. Anaconda 4.4 supports Python 2.7, 3.5, and 3.6. Anaconda 4.3 was the last release to support Python 3.4.

- Minimum supported version of CentOS is now CentOS 6. Anaconda 4.3 was the last release to support CentOS 5.
- Applied pycrypto patch for CVE-2013-7439.
- Improved cp_acp support for install paths with non-ASCII characters on Windows.
- conda is updated from 4.3.14 to 4.3.21.
- Navigator is updated from 1.5.0 to 1.6.2.
- Project is updated from 0.4.1 to 0.6.0.
- Added distributed and pyodbc to the installers.
- Updated EULA.
- Conda packages with "mkl" in the package name now contain a file license.txt with a copy of the Intel Simplified Software License that applies to the Intel Math Kernel Library (MKL).
- Over 90 packages are updated or added.

Highlights:

- add support for the ppc64le (POWER8 LE used by IBM Power Systems and OpenPOWER servers) machine types

Other changes:

- On Windows, the PATH environment variable is no longer changed by default, as this can cause trouble with other software. The recommended approach is to instead use Anaconda Navigator or the Anaconda Prompt (located in the Start Menu under "Anaconda") when you wish to use Anaconda software. Also, Anaconda will always be added to the front of PATH, for either system or user mode. (Previously it was appended to the system path.)
- improve cp_acp support for install path on Windows
- updated 80 packages in the installer (and their dependencies)
- added distributed and pyodbc to the installers
- apply pycrypto patch for CVE-2013-7439
- end support for CentOS 5. CentOS 6 is now the minimum supported version.

Updates:

- anaconda-client from 1.6.0 to 1.6.3
- bokeh from 0.12.4 to 0.12.5
- dask from 0.13.0 to 0.14.3
- ipython from 5.1.0 to 5.3.0
- jupyter_client from 4.4.0 to 5.0.1
- jupyter_console from 5.0.0 to 5.1.0
- jupyter_core from 4.2.1 to 4.3.0
- matplotlib from 2.0.0 to 2.0.2
- numba from 0.30.1 to 0.33.0
- numpy from 1.11.3 to 1.12.1
- pandas from 0.19.2 to 0.20.1

- pillow from 4.0.0 to 4.1.1
- python 3.5 from 3.5.2 to 3.5.3
- python 3.6 from 3.6.0 to 3.6.1
- requests from 2.12.4 to 2.14.2
- scikit-image from 0.12.3 to 0.13.0
- scipy from 0.18.1 to 0.19.0
- spyder from 3.1.2 to 3.1.4
- statsmodels from 0.6.1 to 0.8.0

Packages

Python 3.6

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
appnope [Mac]	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript [Mac]	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3.2	Community-developed Python Library for Astronomy / BSD
babel	2.4.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.5	Python interactive visualization library for modern web browsers / BSD
boto	2.46.1	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2	1.0.6	high-quality data compressor / BSD
cairo [Linux]	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.3	Universal character encoding detector / GNU Lesser General Public License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
comtypes [Windows]	1.1.2	pure Python COM package / MIT
conda	4.3.21	OS-agnostic, system-level binary package and environment manager. / BSD
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Apache v

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Table 189 – continued from previous page

Name	Version	Summary / License
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.14.3	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / GPL2
decorator	4.0.11	Better living through Python with decorators / BSD
distributed	1.16.3	Lightweight library for distributed computing in Python / BSD 3-Clause
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.5	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD
ipython	5.3.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	5.0.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.1.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license

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Table 189 – continued from previous page

Name	Version	Summary / License
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libtool Linux	2.4.2	The GNU Portable Library Tool / GPL3
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol / MIT
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.18.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
menuinst Windows	1.4.7	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.1.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.3.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.3	Build Python programs to work with human language data / Apache Software Lic
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numba	0.33.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.0	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License
openpyxl	2.4.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apac
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.1	Powerful data structures and data analysis tools / BSD
pandocfilters	1.4.1	utilities for writing pandoc filters in python / BSD License
pango Linux	1.40.3	Text layout and rendering engine / LGPL
partd	0.3.8	Appendable key-value byte store / BSD
path.py	10.3.1	module wrapper for os.path / MIT
pathlib2	2.2.1	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-clause
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.1.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.14	library for building powerful interactive command lines in Python / BSD

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Table 189 – continued from previous page

Name	Version	Summary / License
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.33	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPL
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.7	Simple and powerful testing with Python / MIT
python	3.6.1	general purpose programming language / PSF
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.4	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.3.0	Jupyter Qt Console / Modified BSD License
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
requests	2.14.2	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.0	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.5.6	Documentation generator / BSD
spyder	3.1.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.9	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback fiddling library for Python / BSD

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Table 189 – continued from previous page

Name	Version	Summary / License
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3	collection of utilities for Python code working with files and commands / MIT
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.1	A Python web framework and asynchronous networking library / Apache 2.0
traitlets	4.3.2	Configuration system for Python applications / Modified BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc Linux Mac	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	2.0.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows console /
wrapt	1.10.10	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL
zict	0.1.2	mutable mapping tools / BSD
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.10	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.3	anaconda.org command line client library / BSD 3-clause
anaconda-navigator	1.6.2	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.6.0	reproducible, executable project directories / BSD 3-clause
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
asn1crypto	0.22.0	ASN.1 parser and serializer / MIT
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3.2	Community-developed Python Library for Astronomy / BSD
babel	2.4.0	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.5	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.6.0	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bleach	1.5.0	easy whitelist-based HTML-sanitizing tool / Apache License Version 2.0
bokeh	0.12.5	Python interactive visualization library for modern web browsers / BSD
boto	2.46.1	Amazon Web Services Library / MIT
bottleneck	1.2.1	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2	1.0.6	high-quality data compressor / BSD

Table 190 – continued from previous page

Name	Version	Summary / License
cairo Linux	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1,
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.10.0	C Foreign Function Interface for Python / MIT
chardet	3.0.3	Universal character encoding detector / GNU Lesser General Public License
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.9	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.3.21	OS-agnostic, system-level binary package and environment manager. / BSD
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.5	backports and enhancements for the contextlib module / PSF
cryptography	1.8.1	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BS
dask	0.14.3	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / G
decorator	4.0.11	Better living through Python with decorators / BSD
distributed	1.16.3	Lightweight library for distributed computing in Python / BSD 3-Clause
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, P
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12.2	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apa
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.1.1	A Java-style futures package for Python / PSF
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.12	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.7.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-l
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
html5lib	0.999	HTML parser based on the WHATWG HTML specification / MIT
idna	2.5	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / Python Software Foundation License

Table 190 – continued from previous page

Name	Version	Summary / License
ipykernel	4.6.1	IPython Kernel for Jupyter / BSD
ipython	5.3.0	Productive Interactive Computing / BSD
ipython_genutils	0.2.0	vestigial utilities from IPython / BSD
ipywidgets	6.0.0	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.10.2	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.6	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software licer
jsonschema	2.6.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	5.0.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.1.0	Jupyter terminal console / BSD
jupyter_core	4.3.0	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libtool Linux	2.4.2	The GNU Portable Library Tool / GPL3
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.18.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.3	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.2	Python 2D plotting library / PSF-based
menuinst Windows	1.4.7	cross platform menu item installation / BSD
mistune	0.7.4	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
msgpack-python	0.4.8	An efficient binary serialization format / Apache
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
navigator-updater	0.1.0	Anaconda Navigator Updater / proprietary - Continuum Analytics, Inc.
nbconvert	5.1.1	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.3.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.3	Build Python programs to work with human language data / Apache Softwa
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	5.0.0	web-based notebook environment for interactive computing / BSD
numba	0.33.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.2	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD

Table 190 – continued from previous page

Name	Version	Summary / License
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.0	Shapeshifting for your data / BSD
olefile	0.44	parse, read and write Microsoft OLE2 files / BSD License
openpyxl	2.4.7	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2l	OpenSSL is an open-source implementation of the SSL and TLS protocols /
packaging	16.8	core utilities for Python packages / BSD or Apache 2.0
pandas	0.20.1	Powerful data structures and data analysis tools / BSD
pandocfilters	1.4.1	utilities for writing pandoc filters in python / BSD License
pango Linux	1.40.3	Text layout and rendering engine / LGPL
partd	0.3.8	Appendable key-value byte store / BSD
path.py	10.3.1	module wrapper for os.path / MIT
pathlib2	2.2.1	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-cl
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.1.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.10	implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.14	library for building powerful interactive command lines in Python / BSD
psutil	5.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.33	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.2	Python bindings to the picosat SAT solver / MIT
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.2.0	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyodbc	4.0.16	DB API Module for ODBC / MIT
pyopenssl	17.0.0	Python wrapper module around the OpenSSL library / Apache Software Lic
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.7	Simple and powerful testing with Python / MIT
python	2.7.13	general purpose programming language / PSF
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2017.2	World timezone definitions, modern and historical / MIT
pywavelets	0.5.2	wavelet transform module / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.4	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.3.0	Jupyter Qt Console / Modified BSD License

Table 190 – continued from previous page

Name	Version	Summary / License
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase /
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
requests	2.14.2	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scandir	1.5	scandir, a better directory iterator and faster os.walk() / BSD License
scikit-image	0.13.0	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.19.0	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sortedcollections	0.5.3	Python Sorted Collections / Apache Software License
sortedcontainers	1.5.7	sorted Container Types: SortedList, SortedDict, and SortedSet / Apache 2.0
sphinx	1.5.6	Documentation generator / BSD
spyder	3.1.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.9	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.8.0	Statistical computations and models / 3-clause BSD
subprocess32	3.2.7	backport of the subprocess module from Python 3.2/3.3 for use on 2.x / Pyth
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
tblib	1.3.2	Traceback fiddling library for Python / BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
testpath	0.3	collection of utilities for Python code working with files and commands / M
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.5.1	A Python web framework and asynchronous networking library / Apache 2.(
traitlets	4.3.2	Configuration system for Python applications / Modified BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
unixodbc Linux Mac	2.3.4	ODBC (Open Database Connectivity) implementation for Unix / LGPLv2
vs2008_runtime Windows	9.00.30729.5054	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.12.2	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	2.0.0	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows cons
wrapt	1.10.10	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.4	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, G
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL

Table 190 – continued from previous page

Name	Version	Summary / License
zict	0.1.2	mutable mapping tools / BSD
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.3.1 (Mar 10, 2017)

This patch release fixes problems with Anaconda Navigator not starting correctly on some versions of Mac OS X when using the GUI installers.

Fixes:

- removed creation of `~/.continuum` folder during install process on all platforms
- fixed '//' showing up in prefix when installing system wide on Mac OS using the GUI installer
- fixed OpenSSL not being installable into a path which contains spaces
- allow Unicode characters in install path on Windows (cp_acp fix)

Updates:

- anaconda-navigator from 1.4.3 to 1.5.0
- conda from 4.3.8 to 4.3.14

Added:

- anaconda-project 0.4.1

Packages

Python 3.6

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.0	anaconda.org command line client library / BSD
anaconda-navigator	1.5.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.4.1	reproducible, executable project directories / BSD
appnope [Mac]	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript [Mac]	1.0.1	Control AppleScriptable applications from Python / Public-Domain
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.5.3	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.4	Python interactive visualization library for modern web browsers / BSD
boto	2.45.0	Amazon Web Services Library / MIT
bottleneck	1.2.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2	1.0.6	high-quality data compressor / BSD
cairo [Linux]	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL
cffi	1.9.1	C Foreign Function Interface for Python / MIT

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Table 191 – continued from previous page

Name	Version	Summary / License
chardet	2.3.0	Universal character encoding detector / GNU Library or Lesser General Public Li
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.3.14	OS-agnostic, system-level binary package and environment manager. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
contextlib2	0.5.4	backports and enhancements for the contextlib module / PSF
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Apache v
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.13.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / GPL2
decorator	4.0.11	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.11	Lightweight in-process concurrent programming / MIT
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.2	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.5.2	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT

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Table 191 – continued from previous page

Name	Version	Summary / License
jinja2	2.9.4	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD
jupyter_core	4.2.1	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol / MIT
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.15.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.2	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.0	Python 2D plotting library / PSF-based
menuinst Windows	1.4.4	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.2.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.2	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.3.1	web-based notebook environment for interactive computing / BSD
numba	0.30.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.4.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apac
pandas	0.19.2	Powerful data structures and data analysis tools / BSD
partd	0.3.7	Appendable key-value byte store / BSD
path.py	10.0	Module wrapper for os.path / MIT
pathlib2	2.2.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-clause
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC

cont

Table 191 – continued from previous page

Name	Version	Summary / License
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.0.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.9	library for building powerful interactive command lines in Python / BSD
psutil	5.0.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.32	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPL
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.5	Simple and powerful testing with Python / MIT
python	3.6.0	general purpose programming language / PSF
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2016.10	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.12.4	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.5.1	Documentation generator / BSD

cont

Table 191 – continued from previous page

Name	Version	Summary / License
spyder	3.1.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.5	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.4.2	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.15	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows console /
wrapt	1.10.8	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.0	anaconda.org command line client library / BSD
anaconda-navigator	1.5.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
anaconda-project	0.4.1	reproducible, executable project directories / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.5	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.5.3	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.4	Python interactive visualization library for modern web browsers / BSD
boto	2.45.0	Amazon Web Services Library / MIT
bottleneck	1.2.0	Fast NumPy array functions written in Cython. / Simplified BSD

Table 192 – continued from previous page

Name	Version	Summary / License
bzip2	1.0.6	high-quality data compressor / BSD
cairo Linux	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1,
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.9.1	C Foreign Function Interface for Python / MIT
chardet	2.3.0	Universal character encoding detector / GNU Library or Lesser General Pub
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.3.14	OS-agnostic, system-level binary package and environment manager. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.4	backports and enhancements for the contextlib module / PSF
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BS
dask	0.13.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / G
decorator	4.0.11	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, P
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apa
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.0.5	A Java-style futures package for Python / BSD
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.11	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-I
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.2	Internationalized Domain Names in Applications / BSD

Table 192 – continued from previous page

Name	Version	Summary / License
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / Python Software Foundation License
ipykernel	4.5.2	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.4	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software licer
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD
jupyter_core	4.2.1	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.15.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.2	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.0	Python 2D plotting library / PSF-based
menuinst Windows	1.4.4	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.2.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.2	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.3.1	web-based notebook environment for interactive computing / BSD
numba	0.30.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD

Table 192 – continued from previous page

Name	Version	Summary / License
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.4.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2k	OpenSSL is an open-source implementation of the SSL and TLS protocols /
pandas	0.19.2	Powerful data structures and data analysis tools / BSD
partd	0.3.7	Appendable key-value byte store / BSD
path.py	10.0	Module wrapper for os.path / MIT
pathlib2	2.2.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-cl
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.0.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.9	library for building powerful interactive command lines in Python / BSD
psutil	5.0.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.32	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache Software Lic
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.5	Simple and powerful testing with Python / MIT
python	2.7.13	general purpose programming language / PSF
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2016.10	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase /
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.12.4	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL

Table 192 – continued from previous page

Name	Version	Summary / License
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scandir	1.4	scandir, a better directory iterator and faster os.walk() / BSD License
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.5.1	Documentation generator / BSD
spyder	3.1.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.5	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
subprocess32	3.2.7	backport of the subprocess module from Python 3.2/3.3 for use on 2.x / Pyth
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.4.2	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2008_runtime Windows	9.00.30729.5054	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.15	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows cons
wrapt	1.10.8	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, G
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.3.0.1 (Feb 03, 2017)

In this "mirco" patch release, we fixed a problem with the Windows installers which was causing problems with Qt applications when the install prefix exceeds 30 characters. No new Anaconda meta-packages correspond to this release (only new Windows installers).

Anaconda 4.3.0 (Jan 31, 2017)

Highlights:

- The Anaconda3 installers are based on Python 3.6. Anaconda 4.3 supports Python 2.7, 3.4, 3.5 and 3.6. Anaconda 4.3 will be the last release which supports Python 3.4. We will discontinue regular Python 3.4 package updates in the next release.
- The Intel Math Kernel Library (MKL) is updated from 11.3.3 to 2017.0.1.
- Over 90 packages are updated.
- seaborn is now installed by default.

Other changes:

- Updates jpeg and libpng to increase compatibility with conda-forge.
- Warns about possible errors if installing on Windows into an install path with spaces, and does not allow installation if the install path contains unicode characters.
- Fixes many Windows menu uninstallation issues and some other often reported uninstallation issues on Windows.
- Anaconda 4.2 is the last release that supports macOS 10.7 and macOS 10.8. Anaconda 4.3 supports macOS versions from 10.9 through the current version 10.12.
- conda-build, anaconda-clean and the Jupyter Notebook extensions are no longer installed by default but can be installed with a single conda command.

Major package updates:

- anaconda-client from 1.5.1 to 1.6.0
- anaconda-navigator from 1.3.1 to 1.4.3
- bokeh from 0.12.2 to 0.12.4
- conda from 4.2.9 to 4.3.8
- dask from 0.11.0 to 0.13.0
- jupyter_core from 4.2.0 to 4.2.1
- matplotlib from 1.5.3 to 2.0.0
- mkl from 11.3.3 to 2017.0.1
- numba from 0.28.1 to 0.30.1
- numpy from 1.11.1 to 1.11.3
- pandas from 0.18.1 to 0.19.2
- pillow from 3.3.1 to 4.0.0
- python from 2.7.12 to 2.7.13
- requests from 2.11.1 to 2.12.4

- scikit-learn from 0.17.1 to 0.18.1
- spyder from 3.0.0 to 3.1.2
- seaborn 0.7.1

Packages

Python 3.6

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.0	anaconda.org command line client library / BSD
anaconda-navigator	1.4.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.5.3	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.4	Python interactive visualization library for modern web browsers / BSD
boto	2.45.0	Amazon Web Services Library / MIT
bottleneck	1.2.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2	1.0.6	high-quality data compressor / BSD
cairo Linux	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL
cffi	1.9.1	C Foreign Function Interface for Python / MIT
chardet	2.3.0	Universal character encoding detector / GNU Library or Lesser General Public Li
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.3.8	OS-agnostic, system-level binary package and environment manager. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
contextlib2	0.5.4	backports and enhancements for the contextlib module / PSF
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Apache v
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.13.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / GPL2
decorator	4.0.11	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT

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Table 193 – continued from previous page

Name	Version	Summary / License
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.11	Lightweight in-process concurrent programming / MIT
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.2	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.5.2	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.4	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD
jupyter_core	4.2.1	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol / MIT
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.15.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.2	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.0	Python 2D plotting library / PSF-based

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Table 193 – continued from previous page

Name	Version	Summary / License
menuinst Windows	1.4.4	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.2.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.2	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.3.1	web-based notebook environment for interactive computing / BSD
numba	0.30.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.4.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apac
pandas	0.19.2	Powerful data structures and data analysis tools / BSD
partd	0.3.7	Appendable key-value byte store / BSD
path.py	10.0	Module wrapper for os.path / MIT
pathlib2	2.2.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-clause
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.0.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.9	library for building powerful interactive command lines in Python / BSD
psutil	5.0.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.32	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache Software License
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPL
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.5	Simple and powerful testing with Python / MIT
python	3.6.0	general purpose programming language / PSF

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Table 193 – continued from previous page

Name	Version	Summary / License
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2016.10	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.12.4	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.5.1	Documentation generator / BSD
spyder	3.1.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.5	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD
tornado	4.4.2	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.15	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows console /
wrapt	1.10.8	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL

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Table 193 – continued from previous page

Name	Version	Summary / License
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.6.0	anaconda.org command line client library / BSD
anaconda-navigator	1.4.3	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astroid	1.4.9	abstract syntax tree for Python with inference support / LGPL
astropy	1.3	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.5	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.5.3	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.4	Python interactive visualization library for modern web browsers / BSD
boto	2.45.0	Amazon Web Services Library / MIT
bottleneck	1.2.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2	1.0.6	high-quality data compressor / BSD
cairo Linux	1.14.8	A 2D graphics library with support for multiple output devices / LGPL 2.1,
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.9.1	C Foreign Function Interface for Python / MIT
chardet	2.3.0	Universal character encoding detector / GNU Library or Lesser General Pub
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.7	Command line interface creation kit / BSD
cloudpickle	0.2.2	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.3.8	OS-agnostic, system-level binary package and environment manager. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.4	backports and enhancements for the contextlib module / PSF
cryptography	1.7.1	Provides cryptographic recipes and primitives to Python developers / Apach
curl	7.52.1	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.25.2	The Cython compiler for writing C extensions for the Python language / Ap
cytoolz	0.8.2	Cython implementation of Toolz, high performance functional utilities / BS
dask	0.13.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.4	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / G
decorator	4.0.11	Better living through Python with decorators / BSD

Table 194 – continued from previous page

Name	Version	Summary / License
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.13.1	Utilities for general- and special-purpose documentation / Public-Domain, P
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.12	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	3.0.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.12.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apa
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.0.5	A Java-style futures package for Python / BSD
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.2.1	Coroutine-based Python network library / MIT
glib Linux	2.50.2	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.11	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-l
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.2	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.18	IPv4/IPv6 manipulation library / Python Software Foundation License
ipykernel	4.5.2	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
isort	4.2.5	Python utility / library to sort Python imports / MIT
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.3	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.9.4	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	9b	Read and write jpeg COM, EXIF, IPTC medata / Custom free software licer
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD
jupyter_core	4.2.1	core Jupyter functionality / BSD
lazy-object-proxy	1.2.2	Fast and thorough lazy object proxy / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libiconv Linux Mac	1.14	Provides iconv for systems which don't have one / GPL and LGPL
libpng	1.6.27	official PNG reference library / libpng license

Table 194 – continued from previous page

Name	Version	Summary / License
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol
libxml2 Linux Mac	2.9.4	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.29	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.15.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.7.2	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	2.0.0	Python 2D plotting library / PSF-based
menuinst Windows	1.4.4	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	2017.0.1	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.9	Multiple dispatch in Python / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.2.0	The reference implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.2	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.3.1	web-based notebook environment for interactive computing / BSD
numba	0.30.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.3	array processing for numbers, strings, records, and objects / BSD
numpydoc	0.6.0	Sphinx extension to support docstrings in Numpy format / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.4.1	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2k	OpenSSL is an open-source implementation of the SSL and TLS protocols /
pandas	0.19.2	Powerful data structures and data analysis tools / BSD
partd	0.3.7	Appendable key-value byte store / BSD
path.py	10.0	Module wrapper for os.path / MIT
pathlib2	2.2.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pcre Linux Mac	8.39	A set of functions that implement regular expression pattern matching / 3-cl
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.2.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	4.0.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	9.0.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.34.0	A low-level software library for pixel manipulation / MIT
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.9	library for building powerful interactive command lines in Python / BSD
psutil	5.0.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.32	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT

Table 194 – continued from previous page

Name	Version	Summary / License
pycparser	2.17	complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.5.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.6.4	Python code static checker / GPL
pyopenssl	16.2.0	Python wrapper module around the OpenSSL library / Apache Software Lic
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pytables	3.3.0	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	3.0.5	Simple and powerful testing with Python / MIT
python	2.7.13	general purpose programming language / PSF
python-dateutil	2.6.0	extensions to the standard Python datetime module / BSD
pytz	2016.10	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	16.0.2	zeromq bindings for Python / LGPL and BSD
qt	5.6.2	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.4.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.2.1	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase /
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.12.4	Python HTTP for Humans / Apache Software License
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	patched copy of ruamel.yaml (a yaml parser) / MIT
scandir	1.4	scandir, a better directory iterator and faster os.walk() / BSD License
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.18.1	set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
seaborn	0.7.1	Statistical data visualization / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.5.1	Documentation generator / BSD
spyder	3.1.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.1.5	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
subprocess32	3.2.7	backport of the subprocess module from Python 3.2/3.3 for use on 2.x / Pyth
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.2	List processing tools and functional utilities / BSD

Table 194 – continued from previous page

Name	Version	Summary / License
tornado	4.4.2	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2008_runtime Windows	9.00.30729.5054	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.15	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows cons
wrapt	1.10.8	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.6	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.2.0	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, G
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.5	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.2.0 (Sep 28, 2016)

Highlights:

- updated Qt from major version 4 to 5
- updated IPython from 4.2 to 5.1
- added anaconda-clean, a tool for cleaning up Anaconda related configuration files and directories

Fixes:

- fixed Windows Outlook crash in silent install mode
- updated OpenSSL to 1.0.2j which contains important security fixes

Updates:

- anaconda-client from 1.4.0 to 1.5.1
- anaconda-navigator from 1.2.1 to 1.3.1
- bokeh from 0.12.0 to 0.12.2
- conda from 4.1.4 to 4.2.9
- conda-build form 1.21.2 to 2.0.2
- dask from 0.10.0 to 0.11.0
- ipython from 4.2.0 to 5.1.0
- jupyter_client from 4.3.0 to 4.4.0
- jupyter_console from 4.1.1 to 5.0.0
- jupyter_core from 4.1.0 to 4.2.0
- matplotlib from 1.5.1 to 1.5.3

- nb_anacondacloud from 1.1.0 to 1.2.0
- nb_conda from 1.1.0 to 2.0.0
- nb_conda_kernels from 1.0.3 to 2.0.0
- numba from 0.26.0 to 0.28.1
- pillow from 3.2.0 to 3.3.1
- requests from 2.10.0 to 2.11.1
- scipy from 0.17.1 to 0.18.1
- spyder from 2.3.9 to 3.0.0

Removed (from installer only):

- pyreadline
- sphinx_rtd_theme
- conda-env (now part of conda itself)

Packages

Python 3.5

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-clean	1.0.0	Delete Anaconda configuration files / BSD
anaconda-client	1.5.1	anaconda.org command line client library / BSD
anaconda-navigator	1.3.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astroid	1.4.7	abstract syntax tree for Python with inference support / LGPL
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.5.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.2	Python interactive visualization library for modern web browsers / BSD
boto	2.42.0	Amazon Web Services Library / MIT
bottleneck	1.1.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cffi	1.7.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.2.9	OS-agnostic, system-level binary package and environment manager. / BSD

continues

Table 195 – continued from previous page

Name	Version	Summary / License
conda-build	2.0.2	Commands and tools for building conda packages / BSD 3-clause
configobj	5.0.6	Config file reading, writing and validation / BSD
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.5	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24.1	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.11.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / GPL2
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clause
dynd-python	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.6	/ Public-Domain
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.2	Coroutine-based Python network library / MIT
glib Linux	2.43.0	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.5.0	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD

continues

Table 195 – continued from previous page

Name	Version	Summary / License
jupyter_core	4.2.0	core Jupyter functionality / BSD
lazy-object-proxy	1.2.1	Fast and thorough lazy object proxy / BSD
libdynd	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol / MIT
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.13.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.4	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.3	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.2.0	/ BSD
nb_conda	2.0.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	2.0.0	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.1.0	The reference implementation of the Jupyter Notebook format / BSD
nbpresent	3.0.2	Next generation slides for Jupyter Notebooks / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.3	web-based notebook environment for interactive computing / BSD
numba	0.28.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.1	array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2j	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-sty
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.6	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	3.3.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT

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Table 195 – continued from previous page

Name	Version	Summary / License
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
pkginfo	1.3.2	query metadatdata from sdists or bdists installed packages / PSF
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.3	library for building powerful interactive command lines in Python / BSD
psutil	4.3.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.3.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.5.4	Python code static checker / GPL
pyopenssl	16.0.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pytables	3.2.3.1	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	3.5.2	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.6.1	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	15.4.0	zeromq bindings for Python / LGPL and BSD
qt	5.6.0	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.3.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.1.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.11.1	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.6	Documentation generator / BSD
spyder	3.0.0	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain

continues

Table 195 – continued from previous page

Name	Version	Summary / License
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.4.1	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.0	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.11	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows console / MIT
wrapt	1.10.6	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.3	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.9	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-clean	1.0.0	Delete Anaconda configuration files / BSD
anaconda-client	1.5.1	anaconda.org command line client library / BSD
anaconda-navigator	1.3.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astroid	1.4.7	abstract syntax tree for Python with inference support / LGPL
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.4	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.5.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.2	Python interactive visualization library for modern web browsers / BSD
boto	2.42.0	Amazon Web Services Library / MIT
bottleneck	1.1.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD

continue

Table 196 – continued from previous page

Name	Version	Summary / License
cffi	1.7.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / BSD
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.2.9	OS-agnostic, system-level binary package and environment manager. / BSD
conda-build	2.0.2	Commands and tools for building conda packages / BSD 3-clause
configobj	5.0.6	Config file reading, writing and validation / BSD
configparser	3.5.0	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.5	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24.1	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.11.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
dbus Linux	1.10.10	message bus system, a simple way for applications to talk to one another / GPL2
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python Linux Mac	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
expat Linux Mac	2.1.0	XML parser library written in C / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
filelock	2.0.6	/ Public-Domain
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.0.5	A Java-style futures package for Python / BSD
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.2	Coroutine-based Python network library / MIT
glib Linux	2.43.0	Core application building blocks for libraries and applications in C / LGPL
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
gst-plugins-base Linux	1.8.0	GStreamer Base Plug-ins / GPL2
gstreamer Linux	1.8.0	library for constructing graphs of media-handling components / LGPL2
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
harfbuzz Linux	0.9.39	An OpenType text shaping engine / MIT
hdf5	1.8.17	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT

continue

Table 196 – continued from previous page

Name	Version	Summary / License
ipaddress	1.0.16	IPv4/IPv6 manipulation library / PSF
ipykernel	4.5.0	IPython Kernel for Jupyter / BSD
ipython	5.1.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	5.2.2	Widgets for the Jupyter Notebook / BSD 3-clause
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.4.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	5.0.0	Jupyter terminal console / BSD
jupyter_core	4.2.0	core Jupyter functionality / BSD
lazy-object-proxy	1.2.1	Fast and thorough lazy object proxy / BSD
libdynd Linux Mac	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgcc Linux	4.8.5	Shared libraries for the GNU Compiler Collection / GPL3
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / ISC
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxcb Linux	1.12	This is the C-language Bindings package to the X Window System protocol / MIT
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.13.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.4	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.3	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.3	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.2.0	/ BSD
nb_conda	2.0.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	2.0.0	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.1.0	The reference implementation of the Jupyter Notebook format / BSD
nbpresent	3.0.2	Next generation slides for Jupyter Notebooks / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.3	web-based notebook environment for interactive computing / BSD
numba	0.28.1	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.1	Fast numerical expression evaluator for NumPy / MIT

continue

Table 196 – continued from previous page

Name	Version	Summary / License
numpy	1.11.1	array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2j	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-s
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.6	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.4	file system based database that uses Python pickles / MIT
pillow	3.3.1	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
pkginfo	1.3.2	query metadatdata from sdists or bdists installed packages / PSF
ply	3.9	Implementation of Lex and Yacc / BSD
prompt_toolkit	1.0.3	library for building powerful interactive command lines in Python / BSD
psutil	4.3.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.3.0	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pylint	1.5.4	Python code static checker / GPL
pyopenssl	16.0.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	5.6.0	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pytables	3.2.3.1	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	2.7.12	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.6.1	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.12	YAML parser and emitter for Python / MIT
pyzmq	15.4.0	zeromq bindings for Python / LGPL and BSD
qt	5.6.0	Qt is a cross-platform application and UI framework / LGPLv3
qtawesome	0.3.3	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.1.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT

continue

Table 196 – continued from previous page

Name	Version	Summary / License
requests	2.11.1	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.14	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.18.1	Scientific Library for Python / BSD
setuptools	27.2.0	Download, build, install, upgrade, and uninstall Python packages / MIT
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.18	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.6	Documentation generator / BSD
spyder	3.0.0	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.4.1	A Python web framework and asynchronous networking library / Apache
traitlets	4.3.0	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2008_runtime Windows	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
wcwidth	0.1.7	measures number of Terminal column cells of wide-character codes / MIT
werkzeug	0.11.11	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
widgetsnbextension	1.2.6	IPython HTML widgets for Jupyter / BSD 3-clause
win_unicode_console Windows	0.5	enable Unicode input and display when running Python from Windows console / MIT
wrapt	1.10.6	Module for decorators, wrappers and monkey patching / BSD
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.3	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.10.0	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.1.1 (Jul 08, 2016)

Fixes:

- Running the shell installer on some older system, would print out (harmless) tracebacks during the install process, see: https://github.com/ContinuumIO/anaconda-issues/issues/860
- We added blaze 0.10.1 back into the installer, which was accidentally missing in 4.1.0

Updates:

- bokeh from 0.11.1 to 0.12.0
- bottleneck from 1.0.0 to 1.1.0
- conda from 4.1.4 to 4.1.6
- conda-build from 1.21.2 to 1.21.3
- numpy from 1.11.0 to 1.11.1
- Python 2.7 from 2.7.11 to 2.7.12
- Python 3.4 from 3.4.4 to 3.4.5
- Python 3.5 from 3.5.1 to 3.5.2

Packages

Python 3.5

Name	Version	Summary / License
alabaster	0.7.8	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.2.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope [Mac]	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript [Mac]	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.4.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.0	Python interactive visualization library for modern web browsers / BSD
boto	2.40.0	Amazon Web Services Library / MIT
bottleneck	1.1.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 [Windows]	1.0.6	high-quality data compressor / BSD
cffi	1.6.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / as-is
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes [Windows]	1.1.2	pure Python COM package / MIT
conda	4.1.6	Package management system and Environment management system / BSD

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Table 197 – continued from previous page

Name	Version	Summary / License
conda-build	1.21.3	Commands and tools for building conda packages / BSD
conda-env	2.5.1	Provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.4	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.10.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-claus
dynd-python	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.1	Coroutine-based Python network library / MIT
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.16	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.2.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.3.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	Core Jupyter functionality / BSD
libdynd	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / MIT

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Table 197 – continued from previous page

Name	Version	Summary / License
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.11.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.0	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.1.0	/ BSD
nb_conda	1.1.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	1.0.3	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	The reference implementation of the Jupyter Notebook format / BSD
nbpresent	3.0.2	Next generation slides for Jupyter Notebooks / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.1	A web-based notebook environment for interactive computing / BSD
numba	0.26.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.0	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.1	array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2h	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.4	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.2	File system based database that uses Python pickles / MIT
pillow	3.2.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Implementation of Lex and Yacc / BSD
psutil	4.3.0	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT

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Table 197 – continued from previous page

Name	Version	Summary / License
pyflakes	1.2.3	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pyopenssl	0.16.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	4.11.4	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A ctypes-based readline for Windows / BSD
pytables	3.2.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	3.5.2	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.0.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.10.0	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.7	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.1	Scientific Library for Python / BSD
setuptools	23.0.0	Download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.16.9	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.1	Documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.9	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.3	A Python web framework and asynchronous networking library / Apache
traitlets	4.2.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
werkzeug	0.11.10	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD

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Table 197 – continued from previous page

Name	Version	Summary / License
xlsxwriter	0.9.2	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.8	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.2.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.4.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.12.0	Python interactive visualization library for modern web browsers / BSD
boto	2.40.0	Amazon Web Services Library / MIT
bottleneck	1.1.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.6.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / as-is
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.1.6	Package management system and Environment management system / BSD
conda-build	1.21.3	Commands and tools for building conda packages / BSD
conda-env	2.5.1	Provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
configparser	3.5.0b2	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.4	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD

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Table 198 – continued from previous page

Name	Version	Summary / License
dask	0.10.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
dynd-python Linux Mac	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.0.5	A Java-style futures package for Python / BSD
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.1	Coroutine-based Python network library / MIT
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.16	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.16	IPv4/IPv6 manipulation library / PSF
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.2.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.3.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	Core Jupyter functionality / BSD
libdynd Linux Mac	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT

continue

Table 198 – continued from previous page

Name	Version	Summary / License
llvmlite	0.11.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.0	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.1.0	/ BSD
nb_conda	1.1.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	1.0.3	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	The reference implementation of the Jupyter Notebook format / BSD
nbpresent	3.0.2	Next generation slides for Jupyter Notebooks / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.1	A web-based notebook environment for interactive computing / BSD
numba	0.26.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.0	Fast numerical expression evaluator for NumPy / MIT
numpy	1.11.1	array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2h	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.4	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.2	File system based database that uses Python pickles / MIT
pillow	3.2.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
ply	3.8	Implementation of Lex and Yacc / BSD
psutil	4.3.0	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT

continue

Table 198 – continued from previous page

Name	Version	Summary / License
pyflakes	1.2.3	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pyopenssl	0.16.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	4.11.4	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A ctypes-based readline for Windows / BSD
pytables	3.2.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	2.7.12	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.0.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.10.0	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL
ruamel_yaml	0.11.7	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.1	Scientific Library for Python / BSD
setuptools	23.0.0	Download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.16.9	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.1	Documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.9	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.3	A Python web framework and asynchronous networking library / Apache
traitlets	4.2.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2008_runtime Windows	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
werkzeug	0.11.10	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT

continue

Table 198 – continued from previous page

Name	Version	Summary / License
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.2	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.1.0 (Jun 28, 2016)

Highlights:

- added Jupyter Notebook Extensions
- Windows installation: silent mode fixes & now compatible with SCCM (System Center Configuration Manager)
- updated MKL to 11.3.3, numpy to 1.11.0, as well as over 80 other updates, see below
- update Navigator from 1.1 to 1.2, in particular it no longer installs a desktop shortcut on macOS
- conda-recipes used to build the vast majority of the packages in the Anaconda installer have been published at: https://github.com/ContinuumIO/anaconda-recipes

Updates:

- anaconda-navigator from 1.1.0 to 1.2.1
- conda from 4.0.5 to 4.1.4
- conda-build from 1.20.0 to 1.21.2
- conda-env from 2.4.5 to 2.5.1
- dask from 0.8.1 to 0.10.0
- datashape from 0.5.1 to 0.5.2
- ipython from 4.1.2 to 4.2.0
- jupyter_client from 4.2.2 to 4.3.0
- mkl from 11.3.1 to 11.3.3
- numba from 0.24.0 to 0.26.0
- numpy from 1.10.4 to 1.11.0
- pandas from 0.18.0 to 0.18.1
- pillow from 3.1.1 to 3.2.0
- requests from 2.9.1 to 2.10.0
- scipy from 0.17.0 to 0.17.1
- spyder from 2.3.8 to 2.3.9

Packages

Python 3.5

Name	Version	Summary / License
alabaster	0.7.8	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.2.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope [Mac]	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript [Mac]	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD
beautifulsoup4	4.4.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.11.1	Python interactive visualization library for modern web browsers / BSD
boto	2.40.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 [Windows]	1.0.6	high-quality data compressor / BSD
cffi	1.6.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / as-is
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes [Windows]	1.1.2	pure Python COM package / MIT
conda	4.1.4	Package management system and Environment management system / BSD
conda-build	1.21.2	Commands and tools for building conda packages / BSD
conda-env	2.5.1	Provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.4	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.10.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-claus
dynd-python	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig [Linux]	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License

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Table 199 – continued from previous page

Name	Version	Summary / License
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.1	Coroutine-based Python network library / MIT
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD
hdf5	1.8.16	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.2.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
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jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
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jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	Core Jupyter functionality / BSD
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libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.11.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.0	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.1.0	/ BSD
nb_conda	1.1.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	1.0.3	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	The reference implementation of the Jupyter Notebook format / BSD
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networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache

continues

Table 199 – continued from previous page

Name	Version	Summary / License
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.1	A web-based notebook environment for interactive computing / BSD
numba	0.26.0	NumPy aware dynamic Python compiler using LLVM / BSD
numexpr	2.6.0	Fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	Array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2h	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.4	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.2	File system based database that uses Python pickles / MIT
pillow	3.2.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Implementation of Lex and Yacc / BSD
psutil	4.3.0	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.2.3	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pyopenssl	0.16.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	4.11.4	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A ctypes-based readline for Windows / BSD
pytables	3.2.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	3.5.1	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.0.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.10.0	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL

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Table 199 – continued from previous page

Name	Version	Summary / License
ruamel_yaml	0.11.7	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.1	Scientific Library for Python / BSD
setuptools	23.0.0	Download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.16.9	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.1	Documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.9	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.3	A Python web framework and asynchronous networking library / Apache
traitlets	4.2.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2015_runtime Windows	14.0.25123	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
werkzeug	0.11.10	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.2	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.8	Configurable, Python 2+3 compatible Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.2.1	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion of arguments for Python scripts / Apache
astropy	1.2.1	Community-developed Python Library for Astronomy / BSD
babel	2.3.3	Utilities to internationalize and localize Python applications / BSD
backports	1.0	/ BSD

continue

Table 200 – continued from previous page

Name	Version	Summary / License
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.4.1	Python library designed for screen-scraping / MIT
bitarray	0.8.1	efficient representation of arrays of booleans – C extension / PSF
blaze	0.10.1	NumPy and Pandas interface to big data / BSD
bokeh	0.11.1	Python interactive visualization library for modern web browsers / BSD
boto	2.40.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	A 2D graphics library with support for multiple output devices / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.6.0	C Foreign Function Interface for Python / MIT
chest	0.2.3	A dictionary that writes its contents to disk / BSD
click	6.6	Command line interface creation kit / BSD
cloudpickle	0.2.1	Extended pickling support for Python objects / as-is
clyent	1.2.2	Command line client library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text in Python / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.1.4	Package management system and Environment management system / BSD
conda-build	1.21.2	Commands and tools for building conda packages / BSD
conda-env	2.5.1	Provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
configparser	3.5.0b2	brings the updated configparser from Python 3.5 to Python 2.6-3.5 / MIT
contextlib2	0.5.3	backports and enhancements for the contextlib module / PSF
cryptography	1.4	Provides cryptographic recipes and primitives to Python developers / Apache
curl	7.49.0	Tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.24	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.8.0	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.10.0	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.2	Language defining a data description protocol / BSD
decorator	4.0.10	Better living through Python with decorators / BSD
dill	0.2.5	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-cla
dynd-python Linux Mac	0.7.2	Python exposure of DyND, a library for dynamic arrays / BSD
entrypoints	0.2.2	/ MIT
enum34	1.1.6	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	Low memory library for creating large XML files / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.11.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	Flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	A library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	1.0.2	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
functools32	3.2.3.2	backport of the functools module from Python 3.2.3 for use on 2.7 / PSF
futures	3.0.5	A Java-style futures package for Python / BSD
get_terminal_size	1.0.0	backport of the get_terminal_size function from Python 3.3 / MIT
gevent	1.1.1	Coroutine-based Python network library / MIT
greenlet	0.4.10	Lightweight in-process concurrent programming / MIT
grin	1.2.1	Enhanced grep-like tool / BSD
h5py	2.6.0	Pythonic interface to the HDF5 binary data format / 3-clause BSD

continue

Table 200 – continued from previous page

Name	Version	Summary / License
hdf5	1.8.16	A data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	A heap with decrease-key and increase-key operations / BSD
idna	2.1	Internationalized Domain Names in Applications / BSD
imagesize	0.7.1	getting image size from png/jpeg/jpeg2000/gif file / MIT
ipaddress	1.0.16	IPv4/IPv6 manipulation library / PSF
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.2.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments / BSD
jbig Linux Mac	2.1	Implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	Autocompletion and static analysis library for Python / MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	Read and write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.5.1	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Open source, interactive data science and scientific computing / BSD
jupyter_client	4.3.0	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	Core Jupyter functionality / BSD
libdynd Linux Mac	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.2.1	portable foreign-function interface library / MIT
libgfortran Linux	3.0.0	GNU Fortran runtime library / GPL3
libpng	1.6.22	The official PNG reference library / libpng license
libsodium Linux	1.0.10	A library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	Support for Tag Image File Format (TIFF) / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit for Gnome / MIT
libxslt Linux Mac	1.1.28	The XSLT C library developed for the GNOME project / MIT
llvmlite	0.11.0	Lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks for Python for Linux and Windows / BSD
lxml	3.6.0	Pythonic binding for the C libraries libxml2 and libxslt / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python 2D plotting library / PSF-based
menuinst Windows	1.4.1	cross platform menu item installation / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.3	Math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch in Python / BSD
nb_anacondacloud	1.1.0	/ BSD
nb_conda	1.1.0	Launch Jupyter kernels for any installed conda environment / BSD
nb_conda_kernels	1.0.3	Launch Jupyter kernels for any installed conda environment / BSD
nbconvert	4.2.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	The reference implementation of the Jupyter Notebook format / BSD
nbpresent	3.0.2	Next generation slides for Jupyter Notebooks / BSD
networkx	1.11	Python package for creating and manipulating complex networks / BSD
nltk	3.2.1	Build Python programs to work with human language data / Apache
nose	1.3.7	Nose extends unittest to make testing easier / LGPL
notebook	4.2.1	A web-based notebook environment for interactive computing / BSD
numba	0.26.0	NumPy aware dynamic Python compiler using LLVM / BSD

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Table 200 – continued from previous page

Name	Version	Summary / License
numexpr	2.6.0	Fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	Array processing for numbers, strings, records, and objects / BSD
odo	0.5.0	Shapeshifting for your data / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2010 xlsx/xlsm files / MIT
openssl	1.0.2h	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-
pandas	0.18.1	Powerful data structures and data analysis tools / BSD
partd	0.3.4	Appendable key-value byte store / BSD
patchelf Linux	0.9	Modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.2.1	Module wrapper for os.path / MIT
pathlib2	2.1.0	object-oriented filesystem paths / MIT
patsy	0.4.1	Describing statistical models in Python using symbolic formulas / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.7.2	File system based database that uses Python pickles / MIT
pillow	3.2.0	The friendly Python Imaging Library(PIL) fork / PIL license
pip	8.1.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
ply	3.8	Implementation of Lex and Yacc / BSD
psutil	4.3.0	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5.1	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	Library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	A set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	Python bindings to the picosat SAT solver / MIT
pycparser	2.14	Complete C99 parser in pure Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python / Public-Domain
pycurl	7.43.0	Python interface to libcurl / LGPL, MIT
pyflakes	1.2.3	Checks Python source files for errors / MIT
pygments	2.1.3	Generic syntax highlighting package / BSD
pyopenssl	0.16.0	Python wrapper module around the OpenSSL library / Apache License, Version 2.0
pyparsing	2.1.4	Create and execute simple grammars / MIT
pyqt	4.11.4	Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A ctypes-based readline for Windows / BSD
pytables	3.2.2	Manage hierarchical datasets to cope with large amounts of data / BSD
pytest	2.9.2	Simple and powerful testing with Python / MIT
python	2.7.11	general purpose programming language / PSF
python-dateutil	2.5.3	Extensions to the standard Python datetime module / BSD
pytz	2016.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.2.1	Jupyter Qt Console / BSD
qtpy	1.0.2	uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MIT
readline Linux Mac	6.2	Line-editing for programs with a command-line interface / GPL3
redis Linux Mac	3.2.0	Advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.5	Redis Python Client / MIT
requests	2.10.0	Python HTTP for Humans / Apache
rope	0.9.4	A Python refactoring library / GPL

continue

Table 200 – continued from previous page

Name	Version	Summary / License
ruamel_yaml	0.11.7	/ MIT
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.1	Scientific Library for Python / BSD
setuptools	23.0.0	Download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	Define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	Transforms a function into a single-dispatch generic function / MIT
sip	4.16.9	Create Python bindings for C and C++ libraries / GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	Snowball stemming library collection for Python / BSD
sockjs-tornado	1.0.3	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.4.1	Documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.9	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.13	Database Abstraction Library / MIT
sqlite	3.13.0	Self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models / 3-clause BSD
sympy	1.0	Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.6	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	Dynamic programming language with GUI elements / BSD-like
toolz	0.8.0	List processing tools and functional utilities / BSD
tornado	4.3	A Python web framework and asynchronous networking library / Apache
traitlets	4.2.1	Configuration system for Python applications / BSD
unicodecsv	0.14.1	Drop-in replacement for csv module which supports unicode strings / BSD
vs2008_runtime Windows	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
werkzeug	0.11.10	A WSGI utility library for Python / BSD
wheel	0.29.0	Built-package format for Python / MIT
xlrd	1.0.0	Extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.9.2	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.2	Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.1.2	Writing data and formatting information to Excel files / BSD
xz Linux Mac	5.2.2	Data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	A human friendly data serialization standard / MIT
zeromq Linux	4.1.4	Distributed messaging / LGPL
zlib	1.2.8	Unobtrusive compression library / zlib

Anaconda 4.0.0 (Mar 29, 2016)

The reason for jumping the Anaconda version from 2.5 to 4.0 is to avoid any possible confusion with the versions of Python included in Anaconda.

Highlights:

- this release of Anaconda includes the new Navigator, which is a graphical tool developed by Continuum Analytics to manage conda environments, applications and much more.

Enhancements:

- much improved package resolving in the new conda 4.0

Fixes:

- updated OpenSSL to 1.0.2g which contains important security fixes

Updates:

- anaconda-client from 1.2.2 to 1.4.0
- bokeh from 0.11.0 to 0.11.1
- conda from 3.19.1 to 4.0.5
- conda-build from 1.19.0 to 1.20.0
- ipython from 4.0.3 to 4.1.2
- jupyter_client from 4.1.1 to 4.2.2
- jupyter_console from 4.1.0 to 4.1.1
- jupyter_core from 4.0.6 to 4.1.0
- numba from 0.23.1 to 0.24.0
- pandas from 0.17.1 to 0.18.0
- pillow from 3.1.0 to 3.1.1
- scikit-image from 0.11.3 to 0.12.3
- scikit-learn from 0.17 to 0.17.1
- sympy from 0.7.6.1 to 1.0

Added:

- anaconda-navigator 1.1.0
- conda-manager 0.3.1
- dask 0.8.1

Removed (from installer only, the packages are still available):

- abstract-rendering
- gevent-websocket
- launcher
- node-webkit

Packages

Python 3.5

Name	Version	Summary / License
alabaster	0.7.7	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.1.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope [Mac]	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript [Mac]	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.1.2	Community-developed python astronomy tools / BSD
babel	2.2.0	Internationalization utilities / BSD

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Table 201 – continued from previous page

Name	Version	Summary / License
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze	0.9.1	Blaze is the next generation of NumPy / BSD
bokeh	0.11.1	statistical and novel interactive HTML plots for Python / BSD
boto	2.39.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cffi	1.5.2	Foreign Function Interface for Python calling C code / MIT
chest	0.2.3	a dictionary that spills to disk / BSD
cloudpickle	0.1.1	Extended pickling support for Python objects / as-is
clyent	1.2.1	Command line client Library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.0.5	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.20.0	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
conda-manager	0.3.1	Graphical conda package manager / MIT
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.3	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.5	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.8.1	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.1	A data description language / BSD
decorator	4.0.9	Better living through Python with decorators / BSD
dill	0.2.4	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clause B
dynd-python	0.7.2	Python exposure of DyND / BSD
et_xmlfile	1.0.1	implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
gevent	1.1.0	Coroutine-based network library / MIT
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
h5py	2.5.0	read and write HDF5 files from Python / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	a heap with decrease-key and increase-key operations / BSD
idna	2.0	Internationalized Domain Names in Applications / BSD
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.1.2	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD

continues on

Table 201 – continued from previous page

Name	Version	Summary / License
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.2.2	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	base package on which Jupyter projects rely / BSD
libdynd	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	3.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.9.0	lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks / BSD
lxml	3.6.0	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python plotting package / PSF-based
menuinst Windows	1.3.2	cross platform install of menu items / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.1	math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.1.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating graphs and networks / BSD
nltk	3.2	Natural Language Toolkit / Apache
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.1.0	a web-based notebook environment for interactive computing / BSD
numba	0.24.0	compiling Python code using LLVM / BSD
numexpr	2.5	fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	array processing for numbers, strings, records, and objects. / BSD
odo	0.4.2	Data Migration for Blaze Project / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2g	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-style
pandas	0.18.0	Powerful data structures for data analysis, time series,and statistics / BSD
partd	0.3.2	Appendable key-value byte store / BSD
patchelf Linux	0.8	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.1.1	Python Imaging Library (Fork) / PIL license
pip	8.1.1	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	4.1.0	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC

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Table 201 – continued from previous page

Name	Version	Summary / License
py	1.4.31	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.3	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.1.0	passive checker of Python programs / MIT
pygments	2.1.1	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPL
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BSD
pytest	2.8.5	simple powerful testing with Python / MIT
python	3.5.1	general purpose programming language / PSF
python-dateutil	2.5.1	Extensions to the standard Python datetime module / BSD
pytz	2016.2	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtawesome	0.3.2	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.0	Jupyter Qt Console / BSD
qtpy	1.0	Provides an uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / M
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.9.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.0	Scientific Library for Python / BSD
setuptools	20.3	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	brings functools.singledispatch from Python 3.4 to Python 2.6-3.3 / MIT
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.5	Python documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.12	Database Abstraction Library / MIT
sqlite Linux Mac	3.9.2	self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	1.0	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache

continues on

Table 201 – continued from previous page

Name	Version	Summary / License
traitlets	4.2.1	configuration system for Python applications / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
vs2015_runtime Windows	14.00.23026.0	Bundles of the MSVC 14 (VS 2015) runtime / Proprietary
werkzeug	0.11.4	The Swiss Army knife of Python web development / BSD
wheel	0.29.0	built-package format for Python / MIT
xlrd	0.9.4	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.8.4	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.0	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPLv2
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
alabaster	0.7.7	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.4.0	anaconda.org command line client library / BSD
anaconda-navigator	1.1.0	Anaconda Navigator / proprietary - Continuum Analytics, Inc.
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.1.2	Community-developed python astronomy tools / BSD
babel	2.2.0	Internationalization utilities / BSD
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze	0.9.1	Blaze is the next generation of NumPy / BSD
bokeh	0.11.1	statistical and novel interactive HTML plots for Python / BSD
boto	2.39.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, MPL 1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.5.2	Foreign Function Interface for Python calling C code / MIT
chest	0.2.3	a dictionary that spills to disk / BSD
cloudpickle	0.1.1	Extended pickling support for Python objects / as-is
clyent	1.2.1	Command line client Library for windows and posix / BSD
colorama	0.3.7	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	4.0.5	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.20.0	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
conda-manager	0.3.1	Graphical conda package manager / MIT
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.3	provides cryptographic recipes and primitives to Python developers / Apache

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Table 202 – continued from previous page

Name	Version	Summary / License
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.10.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.5	Cython implementation of Toolz, high performance functional utilities / BSD
dask	0.8.1	Task scheduling and blocked algorithms for parallel processing / BSD
datashape	0.5.1	A data description language / BSD
decorator	4.0.9	Better living through Python with decorators / BSD
dill	0.2.4	Serialize all of python (almost) / 3-clause BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clause BS
dynd-python Linux Mac	0.7.2	Python exposure of DyND / BSD
enum34	1.1.2	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
flask-cors	2.1.2	flask extension adding a decorator for CORS support / MIT
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
futures	3.0.3	Backport of the concurrent.futures package from Python 3.2 / BSD
gevent	1.1.0	Coroutine-based network library / MIT
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
grin	1.2.1	grep program configured the way Robert Kern likes it / BSD
h5py	2.5.0	read and write HDF5 files from Python / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-like
heapdict	1.0.0	a heap with decrease-key and increase-key operations / BSD
idna	2.0	Internationalized Domain Names in Applications / BSD
ipaddress	1.0.14	IPv4/IPv6 manipulation library / PSF
ipykernel	4.3.1	IPython Kernel for Jupyter / BSD
ipython	4.1.2	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.2.2	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.1	Jupyter terminal console / BSD
jupyter_core	4.1.0	base package on which Jupyter projects rely / BSD
libdynd Linux Mac	0.7.2	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	3.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT

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Table 202 – continued from previous page

Name	Version	Summary / License
llvmlite	0.9.0	lightweight wrapper around basic LLVM functionality / BSD
locket	0.2.0	File based locks / BSD
lxml	3.6.0	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python plotting package / PSF-based
menuinst Windows	1.3.2	cross platform install of menu items / BSD
mistune	0.7.2	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.1	math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
mpmath	0.19	Python library for arbitrary-precision floating-point arithmetic / BSD
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.1.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating graphs and networks / BSD
nltk	3.2	Natural Language Toolkit / Apache
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.1.0	a web-based notebook environment for interactive computing / BSD
numba	0.24.0	compiling Python code using LLVM / BSD
numexpr	2.5	fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	array processing for numbers, strings, records, and objects. / BSD
odo	0.4.2	Data Migration for Blaze Project / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2g	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-style
pandas	0.18.0	Powerful data structures for data analysis, time series,and statistics / BSD
partd	0.3.2	Appendable key-value byte store / BSD
patchelf Linux	0.8	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	4.0.1	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.1.1	Python Imaging Library (Fork) / PIL license
pip	8.1.1	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	4.1.0	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.3	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.1.0	passive checker of Python programs / MIT
pygments	2.1.1	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv

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Table 202 – continued from previous page

Name	Version	Summary / License
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BSD
pytest	2.8.5	simple powerful testing with Python / MIT
python	2.7.11	general purpose programming language / PSF
python-dateutil	2.5.1	Extensions to the standard Python datetime module / BSD
pytz	2016.2	World timezone definitions, modern and historical / MIT
pywin32 Windows	220	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtawesome	0.3.2	FontAwesome icons in PyQt and PySide applications / MIT
qtconsole	4.2.0	Jupyter Qt Console / BSD
qtpy	1.0	Provides an uniform layer to support PyQt4, PyQt5 and PySide with a single codebase / MI
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.9.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.12.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.0	Scientific Library for Python / BSD
setuptools	20.3	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	brings functools.singledispatch from Python 3.4 to Python 2.6-3.3 / MIT
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.5	Python documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.12	Database Abstraction Library / MIT
sqlite Linux Mac	3.9.2	self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	1.0	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache
traitlets	4.2.1	configuration system for Python applications / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
vs2008_runtime Windows	9.00.30729.1	Bundles of the MSVC 9 (VS 2008) runtime / Proprietary
werkzeug	0.11.4	The Swiss Army knife of Python web development / BSD
wheel	0.29.0	built-package format for Python / MIT
xlrd	0.9.4	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.8.4	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.7.0	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD

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Table 202 – continued from previous page

Name	Version	Summary / License
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPLv2
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 2.5.0 (Feb 05, 2016)

Highlights:

- add MKL (runtime, version 11.3.1) and make it the default backend for numpy, scipy, scikit-learn and numexpr on all platforms

Enhancements:

- added Windows debug information files, more precisely program database (.pdb files) files for Python by default
- added NoRegistry option to Windows installers, passing /NoRegistry=1 makes the installer not touch the registry

Fixes:

- in some cases start menu items were not created on Windows, due to a race condition, which we fixed in menuinst
- fixed the -f option of the Unix bash installers
- updated OpenSSL to 1.0.2f which contains important security fixes

Updates:

- anaconda-client from 1.2.1 to 1.2.2
- bokeh from 0.10.0 to 0.11.0
- conda from 3.18.8 to 3.19.1
- conda-build from 1.18.2 to 1.19.0
- ipython from 4.0.1 to 4.0.3
- jupyter_console from 4.0.3 to 4.1.0
- matplotlib from 1.5.0 to 1.5.1
- numba from 0.22.1 to 0.23.1
- numpy from 1.10.1 to 1.10.4
- pillow from 3.0.0 to 3.1.0
- python 3.4 from 3.4.3 to 3.4.4
- requests from 2.8.1 to 2.9.1
- scipy from 0.16.0 to 0.17.0

Added:

- et_xmlfile 1.0.1
- futures 3.0.3

- mkl 11.3.1
- mkl-service 1.1.1

Removed (from installer only, the packages are still maintained and available):

- openblas 0.2.14 (Linux)
- theano 0.7.0 (Linux)
- ujson 1.33

Packages

Python 3.5

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.7	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.2.2	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.1.1	Community-developed python astronomy tools / BSD
babel	2.2.0	Internationalization utilities / BSD
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.9.0	Blaze is the next generation of NumPy / BSD
bokeh	0.11.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.39.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT
clyent	1.2.0	Command line client Library for windows and posix / BSD
colorama	0.3.6	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.19.1	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.19.0	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.9.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.5	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.5.0	A data description language / BSD
decorator	4.0.6	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clause BSI
dynd-python	0.7.1	Python exposure of DyND / BSD
et_xmlfile	1.0.1	implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD

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Table 203 – continued from previous page

Name	Version	Summary / License
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
futures	3.0.3	Backport of the concurrent.futures package from Python 3.2 / BSD
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-like
idna	2.0	Internationalized Domain Names in Applications / BSD
ipykernel	4.2.2	IPython Kernel for Jupyter / BSD
ipython	4.0.3	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.0	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd	0.7.1	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.8.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.5.0	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python plotting package / PSF-based
menuinst Windows	1.3.2	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.1	math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
msvc_runtime Windows	1.0.1	Bundles of the MSVC runtime for your Python / Proprietary
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.1.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.1.0	a web-based notebook environment for interactive computing / BSD
numba	0.23.1	compiling Python code using LLVM / BSD
numexpr	2.4.6	fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	array processing for numbers, strings, records, and objects. / BSD

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Table 203 – continued from previous page

Name	Version	Summary / License
odo	0.4.0	Data Migration for Blaze Project / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2f	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-style
pandas	0.17.1	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.8	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.1.0	Python Imaging Library (Fork) / PIL license
pip	8.0.2	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	3.4.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.3	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.1	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BSD
pytest	2.8.5	simple powerful testing with Python / MIT
python	3.5.1	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.7	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.1	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.9.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.0	Scientific Library for Python / BSD
setuptools	19.6.2	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	provides 16 stemmer algorithms generated from Snowball algorithms / BSD

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Table 203 – continued from previous page

Name	Version	Summary / License
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.5	Python documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.11	Database Abstraction Library / MIT
sqlite Linux Mac	3.9.2	self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache
traitlets	4.1.0	configuration system for Python applications / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.11.3	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.8.4	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.6.4	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.7	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.2.2	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.1.1	Community-developed python astronomy tools / BSD
babel	2.2.0	Internationalization utilities / BSD
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.9.0	Blaze is the next generation of NumPy / BSD
bokeh	0.11.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.39.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, MPL 1.1
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT

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Table 204 – continued from previous page

Name	Version	Summary / License
clyent	1.2.0	Command line client Library for windows and posix / BSD
colorama	0.3.6	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.19.1	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.19.0	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.9.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.5	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.5.0	A data description language / BSD
decorator	4.0.6	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clause BSI
dynd-python Linux Mac	0.7.1	Python exposure of DyND / BSD
enum34	1.1.2	Robust enumerated type support in Python / BSD
et_xmlfile	1.0.1	implementation of lxml.xmlfile for the standard library / MIT
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
futures	3.0.3	Backport of the concurrent.futures package from Python 3.2 / BSD
gevent	1.0.2	Coroutine-based network library / MIT
gevent-websocket	0.9.5	Websocket handler for the gevent pywsgi server, a Python network library / Apache
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
grin	1.2.1	grep program configured the way Robert Kern likes it / BSD
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-like
idna	2.0	Internationalized Domain Names in Applications / BSD
ipaddress	1.0.14	IPv4/IPv6 manipulation library / PSF
ipykernel	4.2.2	IPython Kernel for Jupyter / BSD
ipython	4.0.3	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.1	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2
jdcal	1.2	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.1.0	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.7.1	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT

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Table 204 – continued from previous page

Name	Version	Summary / License
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.8.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.5.0	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.1	Python plotting package / PSF-based
menuinst Windows	1.3.2	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
mkl	11.3.1	math library for Intel and compatible processors / proprietary - Intel
mkl-service	1.1.2	Python bindings to MKL service functions / 3-clause BSD
msvc_runtime Windows	1.0.1	Bundles of the MSVC runtime for your Python / Proprietary
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.1.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.11	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.1.0	a web-based notebook environment for interactive computing / BSD
numba	0.23.1	compiling Python code using LLVM / BSD
numexpr	2.4.6	fast numerical expression evaluator for NumPy / MIT
numpy	1.10.4	array processing for numbers, strings, records, and objects. / BSD
odo	0.4.0	Data Migration for Blaze Project / BSD
openpyxl	2.3.2	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2f	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-style
pandas	0.17.1	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.8	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.7.0	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.1.0	Python Imaging Library (Fork) / PIL license
pip	8.0.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	3.4.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.31	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.3	PycURL – cURL library module for Python / LGPL, MIT

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Table 204 – continued from previous page

Name	Version	Summary / License
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.1	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2, GPLv3
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BSD
pytest	2.8.5	simple powerful testing with Python / MIT
python	2.7.11	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.7	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	15.2.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.1	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause BSD
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.9.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.17.0	Scientific Library for Python / BSD
setuptools	19.6.2	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	brings functools.singledispatch from Python 3.4 to Python 2.6-3.3 / MIT
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.1	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.5	Python documentation generator / BSD
sphinx_rtd_theme	0.1.9	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.11	Database Abstraction Library / MIT
sqlite Linux Mac	3.9.2	self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache
traitlets	4.1.0	configuration system for Python applications / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.11.3	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.8.4	A Python module for creating Excel XLSX files / BSD

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Table 204 – continued from previous page

Name	Version	Summary / License
xlwings Mac Windows	0.6.4	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 2.4.1 (Dec 08, 2015)

Fixes:

- added missing Windows process elevation when creating menu items
- added libdynd and dynd-python, which was missing in the last release
- fixed Cython on Mac OS X reporting missing libgcc_s.10.5.dylib
- fixed default channels being shown correctly in "conda list" after installing using Anaconda installer

Updates:

- anaconda-client from 1.1.0 to 1.2.1
- conda from 3.18.3 to 3.18.8
- conda-build 1.18.1 to 1.18.2
- conda-env from 2.4.4 to 2.4.5
- ipython from 4.0.0 to 4.0.1
- matplotlib from 1.4.3 to 1.5.0
- numba from 0.21.0 to 0.22.1
- pandas from 0.17.0 to 0.17.1
- python 2.7 from 2.7.10 to 2.7.11
- python 3.5 from 3.5.0 to 3.5.1
- scikit-learn from 0.16.1 to 0.17
- spyder from 2.3.7 to 2.3.8

Added:

- backports_abc 0.4
- cycler 0.9.0
- libdynd and dynd-python 0.7.0
- jbig 2.1
- pycairo 1.10.0

Packages

Python 3.5

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.6	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.2.1	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.6	Community-developed python astronomy tools / BSD
babel	2.1.1	Internationalization utilities / BSD
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.3	Blaze is the next generation of NumPy / BSD
bokeh	0.10.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.38.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT
clyent	1.2.0	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.18.8	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.18.2	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.9.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.4	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.7	A data description language / BSD
decorator	4.0.4	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python	0.7.0	Python exposure of DyND / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipykernel	4.1.1	IPython Kernel for Jupyter / BSD
ipython	4.0.1	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.0	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2

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Table 205 – continued from previous page

Name	Version	Summary / License
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.0.3	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd	0.7.0	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.8.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.0	Python plotting package / PSF-based
menuinst Windows	1.3.1	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
msvc_runtime Windows	1.0.1	Bundles of the MSVC runtime for your Python / Proprietary
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.0.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.10	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.0.6	a web-based notebook environment for interactive computing / BSD
numba	0.22.1	compiling Python code using LLVM / BSD
numexpr	2.4.4	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.3	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.4	Data Migration for Blaze Project / BSD
openblas Linux	0.2.14	optimized BLAS library based on GotoBLAS2 / BSD
openpyxl	2.2.6	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2d	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.17.1	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.6	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.0.0	Python Imaging Library (Fork) / PIL license
pip	7.1.2	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Python Lex & Yacc / BSD

continues

Table 205 – continued from previous page

Name	Version	Summary / License
psutil	3.3.0	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.30	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.8.1	simple powerful testing with Python / MIT
python	3.5.1	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.7	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.1	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.8.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.16.0	Scientific Library for Python / BSD
setuptools	18.5	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache

continues

Table 205 – continued from previous page

Name	Version	Summary / License
traitlets	4.0.0	configuration system for Python applications / BSD
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.11.2	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.7.7	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.5.0	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.6	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.2.1	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.6	Community-developed python astronomy tools / BSD
babel	2.1.1	Internationalization utilities / BSD
backports_abc	0.4	backport of recent additions to the 'collections.abc' module / PSF
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.3	Blaze is the next generation of NumPy / BSD
bokeh	0.10.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.38.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, M
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT
clyent	1.2.0	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.18.8	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.18.2	Commands and tools for building conda packages / BSD
conda-env	2.4.5	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cycler	0.9.0	Composable style cycles / BSD
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache

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Table 206 – continued from previous page

Name	Version	Summary / License
cytoolz	0.7.4	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.7	A data description language / BSD
decorator	4.0.4	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python Linux Mac	0.7.0	Python exposure of DyND / BSD
enum34	1.0.4	Robust enumerated type support in Python / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
gevent	1.0.1	Coroutine-based network library / MIT
gevent-websocket	0.9.3	Websocket handler for the gevent pywsgi server, a Python network library / Apache
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
grin	1.2.1	grep program configured the way Robert Kern likes it / BSD
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipaddress	1.0.14	IPv4/IPv6 manipulation library / PSF
ipykernel	4.1.1	IPython Kernel for Jupyter / BSD
ipython	4.0.1	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.0	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jbig Linux Mac	2.1	implementation of the JBIG1 data compression standard / GPL2
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.0.3	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.7.0	C++ dynamic ndarray library / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.8.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.5.0	Python plotting package / PSF-based
menuinst Windows	1.3.1	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
msvc_runtime Windows	1.0.1	Bundles of the MSVC runtime for your Python / Proprietary

continues

Table 206 – continued from previous page

Name	Version	Summary / License
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.0.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.10	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.0.6	a web-based notebook environment for interactive computing / BSD
numba	0.22.1	compiling Python code using LLVM / BSD
numexpr	2.4.4	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.3	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.4	Data Migration for Blaze Project / BSD
openblas Linux	0.2.14	optimized BLAS library based on GotoBLAS2 / BSD
openpyxl	2.2.6	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2d	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.17.1	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.6	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.0.0	Python Imaging Library (Fork) / PIL license
pip	7.1.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.32.6	A low-level software library for pixel manipulation / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	3.3.0	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.30	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.8.1	simple powerful testing with Python / MIT
python	2.7.11	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.7	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD

continues

Table 206 – continued from previous page

Name	Version	Summary / License
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.1	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.8.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.17	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.16.0	Scientific Library for Python / BSD
setuptools	18.5	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
singledispatch	3.4.0.3	brings functools.singledispatch from Python 3.4 to Python 2.6-3.3 / MIT
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.8	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.3	a Python web framework and asynchronous networking library / Apache
traitlets	4.0.0	configuration system for Python applications / BSD
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.11.2	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.7.7	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.5.0	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq	4.1.3	a messaging system, or “message-oriented middleware” / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 2.4.0 (Nov 02, 2015)

Highlights:

- add Python 3.5 support
- updated NumPy to 1.10
- added OpenBLAS support on Linux
- made drastic speed improvements to conda
- moved from IPython to Jupyter
- improved Start Menus on Windows
- updated Qt to 4.8.7 on all platforms
- updates to more than 60 other packages

Known issues:

- numba and llvmlite are missing for Python 3.5 (because they don't support this Python version yet)
- numpy 1.10 has performance regression for record array access, see https://github.com/numpy/numpy/issues/6467
- Python 3.5 does not work on Windows XP

Major package updates:

- bokeh from 0.9.0 to 0.10.0
- conda from 3.14.1 to 3.18.3
- conda-build from 1.14.1 to 1.18.1
- conda-env from 2.2.3 to 2.4.4
- ipython from 3.2.0 to 4.0.0
- networkx from 1.9.1 to 1.10
- numba from 0.19.1 to 0.21.0
- numpy from 1.9.2 to 1.10.1
- pandas from 0.16.2 to 0.17.0
- pillow from 2.8.2 to 3.0.0
- requests from 2.7.0 to 2.8.1
- scipy from 0.15.1 to 0.16.0
- spyder from 2.3.5.2 to 2.3.7
- sympy from 0.7.6 to 0.7.6.1

Added:

- anaconda-client 1.1.0
- jupyter 1.0.0
- jupyter_client 4.1.1
- jupyter_console 4.0.3
- jupyter_core 4.0.6

Packages

Python 3.5

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.6	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.1.0	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.5	Community-developed python astronomy tools / BSD
babel	2.1.1	Internationalization utilities / BSD
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.3	Blaze is the next generation of NumPy / BSD
bokeh	0.10.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.38.0	Amazon Web Services Library / MIT
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT
clyent	0.4.0	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.18.3	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.18.1	Commands and tools for building conda packages / BSD
conda-env	2.4.4	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.4	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.7	A data description language / BSD
decorator	4.0.4	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipykernel	4.1.1	IPython Kernel for Jupyter / BSD
ipython	4.0.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.0	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license

continues

Table 207 – continued from previous page

Name	Version	Summary / License
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.0.3	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.2.1	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
msvc_runtime Windows	1.0.0	Bundles of the MSVC runtime for your Python / Proprietary
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.0.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.10	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.0.6	a web-based notebook environment for interactive computing / BSD
numexpr	2.4.4	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.3	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.4	Data Migration for Blaze Project / BSD
openblas Linux	0.2.14	optimized BLAS library based on GotoBLAS2 / BSD
openpyxl	2.2.6	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2d	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.17.0	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.6	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.0.0	Python Imaging Library (Fork) / PIL license
pip	7.1.2	PyPA recommended tool for installing Python packages / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	3.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.30	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain

continues

Table 207 – continued from previous page

Name	Version	Summary / License
pycurl	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.8.1	simple powerful testing with Python / MIT
python	3.5.0	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.6	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.0	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.8.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.16.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.16.0	Scientific Library for Python / BSD
setuptools	18.4	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.7	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	self-contained, zero-configuration, SQL database engine / Public-Domain
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.2.1	a Python web framework and asynchronous networking library / Apache
traitlets	4.0.0	configuration system for Python applications / BSD
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.10.4	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD

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Table 207 – continued from previous page

Name	Version	Summary / License
xlsxwriter	0.7.7	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.4.1	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	data compression software with high compression ratio / Public-Domain, GPL
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Python 2.7

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.6	configurable sidebar-enabled Sphinx theme / BSD
anaconda-client	1.1.0	anaconda.org command line client library / BSD
appnope Mac	0.1.0	Disable App Nap on OS X 10.9 / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	1.0.0	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.5	Community-developed python astronomy tools / BSD
babel	2.1.1	Internationalization utilities / BSD
beautifulsoup4	4.4.1	screen-scraping library / MIT
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.3	Blaze is the next generation of NumPy / BSD
bokeh	0.10.0	statistical and novel interactive HTML plots for Python / BSD
boto	2.38.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
bzip2 Windows	1.0.6	high-quality data compressor / BSD
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, M
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
cffi	1.2.1	Foreign Function Interface for Python calling C code / MIT
clyent	0.4.0	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
comtypes Windows	1.1.2	pure Python COM package / MIT
conda	3.18.3	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.18.1	Commands and tools for building conda packages / BSD
conda-env	2.4.4	provides a unified interface to dealing with Conda environments / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	1.0.2	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.45.0	tool and library for transferring data with URL syntax / MIT/X derivate
cython	0.23.4	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.4	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.7	A data description language / BSD
decorator	4.0.4	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
enum34	1.0.4	Robust enumerated type support in Python / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype	2.5.5	A Free, High-Quality, and Portable Font Engine / FreeType License

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Table 208 – continued from previous page

Name	Version	Summary / License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
gevent	1.0.1	Coroutine-based network library / MIT
gevent-websocket	0.9.3	Websocket handler for the gevent pywsgi server, a Python network library / Apache
greenlet	0.4.9	lightweight in-process concurrent programming / MIT
grin	1.2.1	grep program configured the way Robert Kern likes it / BSD
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipaddress	1.0.14	IPv4/IPv6 manipulation library / PSF
ipykernel	4.1.1	IPython Kernel for Jupyter / BSD
ipython	4.0.0	Productive Interactive Computing / BSD
ipython_genutils	0.1.0	vestigial utilities from IPython / BSD
ipywidgets	4.1.0	IPython Static Widgets / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.9.0	/ MIT
jinja2	2.8	An easy to use stand-alone template engine written in pure python. / BSD
jpeg	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
jupyter	1.0.0	Jupyter metapackage / BSD
jupyter_client	4.1.1	Jupyter protocol implementation and client libraries / BSD
jupyter_console	4.0.3	Jupyter terminal console / BSD
jupyter_core	4.0.6	base package on which Jupyter projects rely / BSD
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libgfortran Linux	1.0	GNU Fortran runtime library / GPL3
libpng	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Windows	1.0.3	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff	4.0.6	tiff image library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.7.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.2.1	cross platform install of menu items / BSD
mistune	0.7.1	The fastest markdown parser in pure Python with renderer feature / BSD
msvc_runtime Windows	1.0.0	Bundles of the MSVC runtime for your Python / Proprietary
multipledispatch	0.4.8	Multiple dispatch / BSD
nbconvert	4.0.0	converts notebooks to various other formats via Jinja templates / BSD
nbformat	4.0.1	the base implementation of the Jupyter Notebook format / BSD
networkx	1.10	Python package for creating and manipulating graphs and networks / BSD
nltk	3.1	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MIT
nose	1.3.7	nose extends unittest to make testing easier / LGPL
notebook	4.0.6	a web-based notebook environment for interactive computing / BSD
numba	0.21.0	compiling Python code using LLVM / BSD
numexpr	2.4.4	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.3	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.4	Data Migration for Blaze Project / BSD

continues

Table 208 – continued from previous page

Name	Version	Summary / License
openblas Linux	0.2.14	optimized BLAS library based on GotoBLAS2 / BSD
openpyxl	2.2.6	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl	1.0.2d	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-st
pandas	0.17.0	Powerful data structures for data analysis, time series,and statistics / BSD
patchelf Linux	0.6	a small utility to modify the dynamic linker and RPATH of ELF executables / GPL3
path.py	8.1.2	module wrapper for os.path / MIT
patsy	0.4.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pexpect Linux Mac	3.3	Pexpect allows easy control of interactive console applications / ISC
pickleshare	0.5	tiny shelve-like database with concurrency support / MIT
pillow	3.0.0	Python Imaging Library (Fork) / PIL license
pip	7.1.2	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.26.2	a low-level software library for pixel manipulation / MIT
ply	3.8	Python Lex & Yacc / BSD
psutil	3.2.2	cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.5	Run a subprocess in a pseudo terminal / ISC
py	1.4.30	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py2cairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pyasn1	0.1.9	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	1.0.0	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.4	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.1	A python implmementation of GNU readline. / BSD
pytables	3.2.2	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.8.1	simple powerful testing with Python / MIT
python	2.7.10	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.6	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD
qt	4.8.7	Qt is a cross-platform application and UI framework / LGPL
qtconsole	4.1.0	Jupyter Qt Console / BSD
readline Linux Mac	6.2	line-editing for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.8.1	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.16.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.16.0	Scientific Library for Python / BSD
setuptools	18.4	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
simplegeneric	0.8.1	lets you define simple single-dispatch generic functions / ZPL 2.1

continues

Table 208 – continued from previous page

Name	Version	Summary / License
singledispatch	3.4.0.3	brings functools.singledispatch from Python 3.4 to Python 2.6-3.3 / MIT
sip	4.16.9	/ GPL3
six	1.10.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.7	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	self-contained, zero-configuration, SQL database engine / Public-Domain
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6.1	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk	8.5.18	dynamic programming language with GUI elements / BSD-like
toolz	0.7.4	List processing tools and functional utilities / BSD
tornado	4.2.1	a Python web framework and asynchronous networking library / Apache
traitlets	4.0.0	configuration system for Python applications / BSD
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.14.1	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.10.4	The Swiss Army knife of Python web development / BSD
wheel	0.26.0	built-package format for Python / MIT
xlrd	0.9.4	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.7.7	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.4.1	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq	4.1.3	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	massively spiffy yet delicately unobtrusive compression library / zlib

Anaconda 2.3.0 (Jul 02, 2015)

Highlights:

- updates to 60 packages, including Python 2.7.10 and Pandas 0.16.2
- support for signed packages in conda

Fixes:

- fixed the extra space in IPython terminal being created when typing the tab key on Linux
- added missing zope.interface.common sub-package
- fixed Sphinx package being included in Spyder package

Enhancements:

- added support for signed packages in conda
- added curl on Windows, and kerberos authentication support
- added Windows support for libnetcdf and hdf5

- split gdal into libgdal and gdal (python-bindings)

Known issues:

- when opening some HDF5 files, pytables will crash on Windows and Python 3

Major package updates:

- bokeh from 0.8.1 to 0.9.0
- conda from 3.10.0 to 3.14.1
- conda-build from 1.11.0 to 1.14.1
- conda-env from 2.1.3 to 2.2.3
- ipython from 3.0.0 to 3.2.0
- numba from 0.17.0 to 0.19.1
- pandas from 0.15.2 to 0.16.2
- pillow from 2.7.0 to 2.8.2
- python from 2.7.9 to 2.7.10
- requests from 2.6.0 to 2.7.0
- scikit-image from 0.11.2 to 0.11.3
- scikit-learn from 0.15.2 to 0.16.1
- spyder from 2.3.4 to 2.3.5.2

Packages

Python 3.4

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.3	A configurable sidebar-enabled Sphinx theme / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	0.8.9	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.3	Community-developed python astronomy tools / BSD
babel	1.3	Internationalization utilities / BSD
bcolz	0.9.0	columnar and compressed data containers. / BSD
beautiful-soup	4.3.2	Screen-scraping library / PSF, MIT
binstar	0.11.0	Binstar command line client library / BSD
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.0	Blaze is the next generation of NumPy / BSD
blz	0.6.2	a compressed data container / BSD
bokeh	0.9.0	Statistical and novel interactive HTML plots for Python / 3-clause BSD
boto	2.38.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
certifi	14.05.14	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.1.0	Foreign Function Interface for Python calling C code / MIT
clyent	0.3.4	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
conda	3.14.1	cross-platform, Python-agnostic binary package manager / BSD

continue

Table 209 – continued from previous page

Name	Version	Summary / License
conda-build	1.14.1	Commands and tools for building conda packages / BSD
conda-env	2.2.3	Provides a unified interface to dealing with Conda environments. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	0.9.1	provides cryptographic recipes and primitives to Python developers / Apache
curl	7.43.0	tool and library for transferring data with URL syntax / MIT/X derivate
cython	0.22.1	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.3	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.5	A data description language / BSD
decorator	3.4.2	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python	0.6.5	Python exposure of the DyND dynamic multi-dimensional array library / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype Linux Mac	2.5.2	A Free, High-Quality, and Portable Font Engine / FreeType License
greenlet	0.4.7	Lightweight in-process concurrent programming / MIT
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipython	3.2.0	Productive Interactive Computing / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.8.1	/ MIT
jinja2	2.7.3	An easy to use stand-alone template engine written in pure python. / BSD
jpeg Linux Mac	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.6.5	Python exposure of DyND / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libpng Linux Mac	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Mac	0.4.5	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff Linux Mac	4.0.2	PyLibTiff: a Python tiff library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.5.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.0.4	cross platform install of menu items / BSD
mistune	0.5.1	The fastest markdown parser in pure Python with renderer feature / BSD
mock	1.0.1	A Python Mocking and Patching Library for Testing / BSD
multipledispatch	0.4.7	Multiple dispatch / BSD
networkx	1.9.1	Python package for creating and manipulating graphs and networks / BSD
nltk	3.0.3	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MI
nose	1.3.7	nose extends unittest to make testing easier / LGPL
numba	0.19.1	compiling Python code using LLVM / BSD
numexpr	2.4.3	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.2	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.2	Data Migration for Blaze Project / BSD

continue

Table 209 – continued from previous page

Name	Version	Summary / License
openpyxl	1.8.5	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl Linux Mac	1.0.1k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-s
pandas	0.16.2	Powerful data structures for data analysis, time series,and statistics / BSD
patsy	0.3.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pillow	2.8.2	Python Imaging Library (Fork) / PIL license
pip	7.0.3	PyPA recommended tool for installing Python packages / MIT
ply	3.6	Python Lex & Yacc / BSD
psutil	2.2.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.4	Run a subprocess in a pseudo terminal / ISC
py	1.4.27	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.7	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	0.9.2	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.3	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.0	A python implmementation of GNU readline. / BSD
pytables	3.2.0	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.7.1	simple powerful testing with Python / MIT
python	3.4.3	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD
qt Linux Mac	4.8.6	Qt is a cross-platform application and UI framework / LGPL
readline Linux Mac	6.2	provides line-editing and for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.7.0	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
runipy	0.1.3	Run IPython notebooks from the command line / BSD
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.16.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.15.1	Scientific Library for Python / BSD
setuptools	17.1.1	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
sip Linux Mac	4.16.5	/ GPL3
six	1.9.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.5.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.5	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	implements a self-contained, zero-configuration, SQL database engine / Public-Domai

continue

Table 209 – continued from previous page

Name	Version	Summary / License
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk Linux Mac	8.5.18	powerful but easy to learn dynamic programming language / BSD-like
toolz	0.7.2	List processing tools and functional utilities / BSD
tornado	4.2	Tornado is a Python web framework and asynchronous networking library / Apache
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.10.4	The Swiss Army knife of Python web development / BSD
xlrd	0.9.3	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.7.3	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.3.5	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
xz Linux Mac	5.0.5	a free general-purpose data compression software with high compression ratio / Public
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.0.5	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	A Massively Spiffy Yet Delicately Unobtrusive Compression Library / zlib

Python 2.7

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
alabaster	0.7.3	A configurable sidebar-enabled Sphinx theme / BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	0.8.9	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.3	Community-developed python astronomy tools / BSD
babel	1.3	Internationalization utilities / BSD
bcolz	0.9.0	columnar and compressed data containers. / BSD
beautiful-soup	4.3.2	Screen-scraping library / PSF, MIT
binstar	0.11.0	Binstar command line client library / BSD
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.8.0	Blaze is the next generation of NumPy / BSD
blz	0.6.2	a compressed data container / BSD
bokeh	0.9.0	Statistical and novel interactive HTML plots for Python / 3-clause BSD
boto	2.38.0	Amazon Web Services Library / MIT
bottleneck	1.0.0	Fast NumPy array functions written in Cython. / Simplified BSD
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, M
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
certifi	14.05.14	Python package for providing Mozilla's CA Bundle. / ISC
cffi	1.1.0	Foreign Function Interface for Python calling C code / MIT
clyent	0.3.4	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
conda	3.14.1	cross-platform, Python-agnostic binary package manager / BSD
conda-build	1.14.1	Commands and tools for building conda packages / BSD
conda-env	2.2.3	Provides a unified interface to dealing with Conda environments. / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	0.9.1	provides cryptographic recipes and primitives to Python developers / Apache

continue

Table 210 – continued from previous page

Name	Version	Summary / License
curl	7.43.0	tool and library for transferring data with URL syntax / MIT/X derivate
cython	0.22.1	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.3	Cython implementation of Toolz, high performance functional utilities / BSD
datashape	0.4.5	A data description language / BSD
decorator	3.4.2	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python	0.6.5	Python exposure of the DyND dynamic multi-dimensional array library / BSD
enum34	1.0.4	Robust enumerated type support in Python / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype Linux Mac	2.5.2	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
gevent	1.0.1	Coroutine-based network library / MIT
gevent-websocket	0.9.3	Websocket handler for the gevent pywsgi server, a Python network library / Apache
greenlet	0.4.7	Lightweight in-process concurrent programming / MIT
grin	1.2.1	A grep program configured the way I like it / BSD
h5py	2.5.0	Read and write HDF5 files from Python. / 3-clause BSD
hdf5	1.8.15.1	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
idna	2.0	Internationalized Domain Names in Applications / BSD
ipaddress	1.0.7	IPv4/IPv6 manipulation library / PSF
ipython	3.2.0	Productive Interactive Computing / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.8.1	/ MIT
jinja2	2.7.3	An easy to use stand-alone template engine written in pure python. / BSD
jpeg Linux Mac	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.6.5	Python exposure of DyND / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libpng Linux Mac	1.6.17	libpng is the official PNG reference library / libpng license
libsodium Linux Mac	0.4.5	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff Linux Mac	4.0.2	PyLibTiff: a Python tiff library / BSD-like
libxml2 Linux Mac	2.9.2	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.5.0	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.4	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.0.4	cross platform install of menu items / BSD
mistune	0.5.1	The fastest markdown parser in pure Python with renderer feature / BSD
mock	1.0.1	A Python Mocking and Patching Library for Testing / BSD
multipledispatch	0.4.7	Multiple dispatch / BSD
networkx	1.9.1	Python package for creating and manipulating graphs and networks / BSD
nltk	3.0.3	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MI
nose	1.3.7	nose extends unittest to make testing easier / LGPL
numba	0.19.1	compiling Python code using LLVM / BSD
numexpr	2.4.3	Fast numerical expression evaluator for NumPy / MIT

continue

Table 210 – continued from previous page

Name	Version	Summary / License
numpy	1.9.2	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.2	Data Migration for Blaze Project / BSD
openpyxl	1.8.5	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl Linux Mac	1.0.1k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-s
pandas	0.16.2	Powerful data structures for data analysis, time series,and statistics / BSD
patsy	0.3.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pillow	2.8.2	Python Imaging Library (Fork) / PIL license
pip	7.0.3	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.26.2	a low-level software library for pixel manipulation / MIT
ply	3.6	Python Lex & Yacc / BSD
psutil	2.2.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.4	Run a subprocess in a pseudo terminal / ISC
py	1.4.27	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py2cairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pyasn1	0.1.7	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.14	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	0.9.2	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.15.1	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.3	PyQt is a Python binding of the cross-platform GUI toolkit Qt / Commercial, GPLv2,
pyreadline Windows	2.0	A python implmementation of GNU readline. / BSD
pytables	3.2.0	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.7.1	simple powerful testing with Python / MIT
python	2.7.10	general purpose programming language / PSF
python-dateutil	2.4.2	Extensions to the standard Python datetime module / BSD
pytz	2015.4	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.7.0	zeromq bindings for Python / LGPL and BSD
qt Linux Mac	4.8.6	Qt is a cross-platform application and UI framework / LGPL
readline Linux Mac	6.2	provides line-editing and for programs with a command-line interface / GPL3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.7.0	Python HTTP for Humans / Apache
rope	0.9.4	a python refactoring library / GPL
runipy	0.1.3	Run IPython notebooks from the command line / BSD
scikit-image	0.11.3	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.16.1	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.15.1	Scientific Library for Python / BSD
setuptools	17.1.1	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
sip Linux Mac	4.16.5	/ GPL3
six	1.9.0	Python 2 and 3 compatibility utilities / MIT
snowballstemmer	1.2.0	provides 16 stemmer algorithms generated from Snowball algorithms / BSD
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT

continue

Table 210 – continued from previous page

Name	Version	Summary / License
sphinx	1.3.1	Python documentation generator / BSD
sphinx_rtd_theme	0.1.7	ReadTheDocs.org theme for Sphinx / BSD
spyder	2.3.5.2	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	1.0.5	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	implements a self-contained, zero-configuration, SQL database engine / Public-Domai
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.7.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk Linux Mac	8.5.18	powerful but easy to learn dynamic programming language / BSD-like
toolz	0.7.2	List processing tools and functional utilities / BSD
tornado	4.2	Tornado is a Python web framework and asynchronous networking library / Apache
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.9.4	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL2
werkzeug	0.10.4	The Swiss Army knife of Python web development / BSD
xlrd	0.9.3	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.7.3	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.3.5	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	1.0.0	writing data and formatting information to Excel files / BSD
yaml Linux Mac	0.1.6	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.0.5	a messaging system, or "message-oriented middleware" / LGPL
zlib	1.2.8	A Massively Spiffy Yet Delicately Unobtrusive Compression Library / zlib

Anaconda 2.2.0 (Mar 31, 2015)

Highlights:

- updates to 61 packages, including: Python, NumPy, Bokeh, pandas and blaze
- added 16 new packages
- added HTTPS support for default conda packages repo

Fixes:

- fixed cython command on Windows
- fixed untgz NSIS plugin to install files with exactly 100 characters

Enhancements:

- added https support for default conda packages repo
- renamed dateutil to python-dateutil to reflect the official name
- added HDF5 and netcdf support for GDAL
- switched to using Pillow instead of PIL
- changed ipython-notebook to start directory to home directory on Windows

Major package updates:

- bokeh from 0.6.1 to 0.8.1

- conda from 3.7.0 to 3.10.0
- conda-build from 1.8.2 to 1.11.0
- ipython from 2.2.0 to 3.0.0
- matplotlib from 1.4.0 to 1.4.3
- numba from 0.14.0 to 0.17.0
- numpy from 1.9.0 to 1.9.2
- pandas from 0.14.1 to 0.15.2
- python from 2.7.8 to 2.7.9
- requests from 2.4.1 to 2.6.0
- scikit-image from 0.10.1 to 0.11.2
- scipy from 0.14.0 to 0.15.1
- spyder from 2.3.1 to 2.3.4
- statsmodels from 0.5.0 to 0.6.1
- sympy from 0.7.5 to 0.7.6
- pillow 2.7.0

Packages

Python 3.4

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	0.8.4	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.1	Community-developed python astronomy tools / BSD
bcolz	0.8.1	columnar and compressed data containers. / BSD
beautiful-soup	4.3.2	Screen-scraping library / PSF, MIT
binstar	0.10.1	Binstar command line client library / BSD
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.7.3	Blaze is the next generation of NumPy / BSD
blz	0.6.2	a compressed data container / BSD
bokeh	0.8.1	Statistical and novel interactive HTML plots for Python / 3-clause BSD
boto	2.36.0	Amazon Web Services Library / MIT
certifi	14.05.14	Python package for providing Mozilla's CA Bundle. / ISC
cffi	0.9.2	Foreign Function Interface for Python calling C code / MIT
clyent	0.3.4	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
conda	3.10.0	package management tool Installation / BSD
conda-build	1.11.0	Commands and tools for building conda packages / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	0.8	provides cryptographic recipes and primitives to Python developers / Apache
curl Linux Mac	7.38.0	curl is a command line tool and library for transferring data with URL syntax / MIT/X
cython	0.22	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.2	Cython implementation of Toolz: High performance functional utilities / BSD

continue

Table 211 – continued from previous page

Name	Version	Summary / License
datashape	0.4.4	A data description language / BSD
decorator	3.4.0	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python	0.6.5	Python exposure of the DyND dynamic multi-dimensional array library / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype Linux Mac	2.5.2	A Free, High-Quality, and Portable Font Engine / FreeType License
greenlet	0.4.5	Lightweight in-process concurrent programming / MIT
h5py	2.4.0	Read and write HDF5 files from Python / 3-clause BSD
hdf5 Linux Mac	1.8.14	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
ipython	3.0.0	IPython: Productive Interactive Computing / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.8.1	/ MIT
jinja2	2.7.3	An easy to use stand-alone template engine written in pure python. / BSD
jpeg Linux Mac	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.6.5	Python exposure of DyND / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libpng Linux Mac	1.5.13	libpng is the official PNG reference library. / Open Source
libsodium Linux Mac	0.4.5	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff Linux Mac	4.0.2	PyLibTiff: a Python tiff library / BSD-like
libxml2 Linux Mac	2.9.0	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.2.2	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.2	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.0.4	cross platform install of menu items / BSD
mistune	0.5.1	The fastest markdown parser in pure Python with renderer feature / BSD
mock	1.0.1	A Python Mocking and Patching Library for Testing / BSD
multipledispatch	0.4.7	Multiple dispatch / BSD
networkx	1.9.1	Python package for creating and manipulating graphs and networks / BSD
nltk	3.0.2	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MI
nose	1.3.4	nose extends unittest to make testing easier / LGPL
numba	0.17.0	compiling Python code using LLVM / BSD
numexpr	2.3.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.2	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.1	Data Migration for Blaze Project / BSD
openpyxl	1.8.5	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl Linux Mac	1.0.1k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-s
pandas	0.15.2	Powerful data structures for data analysis, time series,and statistics / BSD
patsy	0.3.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pillow	2.7.0	Python Imaging Library (Fork) / PIL license
pip	6.0.8	PyPA recommended tool for installing Python packages / MIT
ply	3.4	Python Lex & Yacc / BSD

continue

Table 211 – continued from previous page

Name	Version	Summary / License
psutil	2.2.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.4	Run a subprocess in a pseudo terminal / ISC
py	1.4.26	library with cross-python path, ini-parsing, io, code, log facilities / MIT
pyasn1	0.1.7	Offline IP address to Autonomous System Number lookup module / BSD
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.10	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	0.8.1	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.14	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.3	PyQt is a Python binding of the cross-platform GUI toolkit Qt / GPL
pyreadline Windows	2.0	A python implmementation of GNU readline. / BSD
pytables	3.1.1	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.6.4	simple powerful testing with Python / MIT
python	3.4.3	general purpose programming language / PSF
python-dateutil	2.4.1	Extensions to the standard Python datetime module / BSD
pytz	2015.2	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.5.0	zeromq bindings for Python / LGPL and BSD
qt Linux Mac	4.8.6	Qt is a cross-platform application and UI framework / LGPL
readline Linux Mac	6.2	provides line-editing and for programs with a command-line interface / GPLv3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.6.0	Python HTTP for Humans / ISC
rope	0.9.4	a python refactoring library / GPL
runipy	0.1.3	Run IPython notebooks from the command line / BSD
scikit-image	0.11.2	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.15.2	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.15.1	Scientific Library for Python / BSD
setuptools	14.3	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
sip Linux Mac	4.16.5	/ GPL
six	1.9.0	Python 2 and 3 compatibility utilities / MIT
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.2.3	Python documentation generator / BSD
spyder	2.3.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	0.9.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	implements a self-contained, zero-configuration, SQL database engine / Public-Domai
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
tk Linux Mac	8.5.18	powerful but easy to learn dynamic programming language / BSD-like
toolz	0.7.1	List processing tools and functional utilities / BSD
tornado	4.1	Tornado is a Python web framework and asynchronous networking library / Apache
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL
werkzeug	0.10.1	The Swiss Army knife of Python web development / BSD
xlrd	0.9.3	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD

continue

Table 211 – continued from previous page

Name	Version	Summary / License
xlsxwriter	0.6.7	A Python module for creating Excel XLSX files / BSD
xlwings Mac Windows	0.3.4	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xz Linux Mac	5.0.5	a free general-purpose data compression software with high compression ratio / Public
yaml Linux Mac	0.1.4	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.0.4	a messaging system, or "message-oriented middleware" / LGPL
zlib Linux Mac	1.2.8	A Massively Spiffy Yet Delicately Unobtrusive Compression Library / zlib

Python 2.7

Name	Version	Summary / License
abstract-rendering Linux Mac	0.5.1	Rendering as a binning process / 3-clause BSD
appscript Mac	1.0.1	Control AppleScriptable applications from Python / Public-Domain
argcomplete	0.8.4	Bash tab completion for argparse. Tab complete all the things! / Apache
astropy	1.0.1	Community-developed python astronomy tools / BSD
bcolz	0.8.1	columnar and compressed data containers. / BSD
beautiful-soup	4.3.2	Screen-scraping library / PSF, MIT
binstar	0.10.1	Binstar command line client library / BSD
bitarray	0.8.1	efficient arrays of booleans – C extension / PSF
blaze-core	0.7.3	Blaze is the next generation of NumPy / BSD
blz	0.6.2	a compressed data container / BSD
bokeh	0.8.1	Statistical and novel interactive HTML plots for Python / 3-clause BSD
boto	2.36.0	Amazon Web Services Library / MIT
cairo Linux	1.12.18	Cairo is a 2D graphics library with support for multiple output devices. / LGPL 2.1, M
cdecimal	2.3	Fast drop-in replacement for decimal.py / BSD
certifi	14.05.14	Python package for providing Mozilla's CA Bundle. / ISC
cffi	0.9.2	Foreign Function Interface for Python calling C code / MIT
clyent	0.3.4	Command line client Library for windows and posix / BSD
colorama	0.3.3	Cross-platform colored terminal text. / BSD
conda	3.10.0	package management tool Installation / BSD
conda-build	1.11.0	Commands and tools for building conda packages / BSD
configobj	5.0.6	Config file reading, writing and validation / BSD
cryptography	0.8	provides cryptographic recipes and primitives to Python developers / Apache
curl Linux Mac	7.38.0	curl is a command line tool and library for transferring data with URL syntax / MIT/X
cython	0.22	The Cython compiler for writing C extensions for the Python language / Apache
cytoolz	0.7.2	Cython implementation of Toolz: High performance functional utilities / BSD
datashape	0.4.4	A data description language / BSD
decorator	3.4.0	Better living through Python with decorators / BSD
docutils	0.12	Utilities for general- and special-purpose documentation / Public-Domain, PSF, 2-clau
dynd-python	0.6.5	Python exposure of the DyND dynamic multi-dimensional array library / BSD
enum34	1.0.4	Robust enumerated type support in Python / BSD
fastcache	1.0.2	C implementation of Python 3 functools.lru_cache / MIT
flask	0.10.1	A microframework based on Werkzeug, Jinja2 and good intentions / BSD
fontconfig Linux	2.11.1	Fontconfig is a library for configuring and customizing font access / BSD
freetype Linux Mac	2.5.2	A Free, High-Quality, and Portable Font Engine / FreeType License
funcsigs	0.4	Python function signatures from PEP362 for Python 2.6, 2.7 and 3.2+ / Apache
futures	2.2.0	Backport of the concurrent.futures package from Python 3.2 / BSD
gevent	1.0.1	Coroutine-based network library / MIT
gevent-websocket	0.9.3	Websocket handler for the gevent pywsgi server, a Python network library / Apache

continue

Table 212 – continued from previous page

Name	Version	Summary / License
greenlet	0.4.5	Lightweight in-process concurrent programming / MIT
grin	1.2.1	A grep program configured the way I like it / BSD
h5py	2.4.0	Read and write HDF5 files from Python / 3-clause BSD
hdf5 Linux Mac	1.8.14	HDF5 is a data model, library, and file format for storing and managing data / BSD-lik
ipython	3.0.0	IPython: Productive Interactive Computing / BSD
itsdangerous	0.24	Various helpers to pass trusted data to untrusted environments and back. / BSD
jdcal	1.0	Julian dates from proleptic Gregorian and Julian calendars. / BSD
jedi	0.8.1	/ MIT
jinja2	2.7.3	An easy to use stand-alone template engine written in pure python. / BSD
jpeg Linux Mac	8d	read/write jpeg COM, EXIF, IPTC medata / Custom free software license
jsonschema	2.4.0	An implementation of JSON Schema validation for Python / MIT
launcher Mac Windows	1.0.0	Anaconda's application launcher / proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.6.5	Python exposure of DyND / BSD
libffi Linux	3.0.13	A portable foreign-function interface library / MIT
libpng Linux Mac	1.5.13	libpng is the official PNG reference library. / Open Source
libsodium Linux Mac	0.4.5	a modern software library for encryption, signatures, password hashing, etc. / MIT
libtiff Linux Mac	4.0.2	PyLibTiff: a Python tiff library / BSD-like
libxml2 Linux Mac	2.9.0	The XML C parser and toolkit of Gnome / MIT
libxslt Linux Mac	1.1.28	Libxslt is the XSLT C library developed for the GNOME project / MIT
llvmlite	0.2.2	lightweight wrapper around basic LLVM functionality / BSD
lxml	3.4.2	XML processing library combining libxml2/libxslt with the ElementTree API / BSD
markupsafe	0.23	Implements a XML/HTML/XHTML Markup safe string for Python / BSD
matplotlib	1.4.3	Python plotting package / PSF-based
menuinst Windows	1.0.4	cross platform install of menu items / BSD
mistune	0.5.1	The fastest markdown parser in pure Python with renderer feature / BSD
mock	1.0.1	A Python Mocking and Patching Library for Testing / BSD
multipledispatch	0.4.7	Multiple dispatch / BSD
networkx	1.9.1	Python package for creating and manipulating graphs and networks / BSD
nltk	3.0.2	Natural Language Toolkit / Apache
node-webkit Mac Windows	0.10.1	calls Node.js modules from DOM and enables a new way of writing applications / MI
nose	1.3.4	nose extends unittest to make testing easier / LGPL
numba	0.17.0	compiling Python code using LLVM / BSD
numexpr	2.3.1	Fast numerical expression evaluator for NumPy / MIT
numpy	1.9.2	array processing for numbers, strings, records, and objects. / BSD
odo	0.3.1	Data Migration for Blaze Project / BSD
openpyxl	1.8.5	A Python library to read/write Excel 2007 xlsx/xlsm files / MIT
openssl Linux Mac	1.0.1k	OpenSSL is an open-source implementation of the SSL and TLS protocols / Apache-s
pandas	0.15.2	Powerful data structures for data analysis, time series,and statistics / BSD
patsy	0.3.0	a library for describing statistical models and building design matrices. / BSD
pep8	1.6.2	Python style guide checker / MIT
pillow	2.7.0	Python Imaging Library (Fork) / PIL license
pip	6.0.8	PyPA recommended tool for installing Python packages / MIT
pixman Linux	0.26.2	a low-level software library for pixel manipulation / MIT
ply	3.4	Python Lex & Yacc / BSD
psutil	2.2.1	A cross-platform process and system utilities module for Python / BSD
ptyprocess Linux Mac	0.4	Run a subprocess in a pseudo terminal / ISC
py	1.4.26	library with cross-python path, ini-parsing, io, code, log facilities / MIT
py2cairo Linux	1.10.0	Pycairo is a set of Python bindings for the cairo graphics library / LGPL 2.1, MPL 1.1
pyasn1	0.1.7	Offline IP address to Autonomous System Number lookup module / BSD
pyaudio Mac	0.2.7	Bindings for PortAudio v19, the cross-platform audio stream library / MIT

continue

Table 212 – continued from previous page

Name	Version	Summary / License
pycosat	0.6.1	bindings to picosat (a SAT solver) / MIT
pycparser	2.10	C parser in Python / BSD
pycrypto	2.6.1	Cryptographic modules for Python. / Public-Domain
pycurl Linux Mac	7.19.5.1	PycURL – cURL library module for Python / LGPL, MIT
pyflakes	0.8.1	passive checker of Python programs / MIT
pygments	2.0.2	Pygments is a syntax highlighting package written in Python / BSD
pyopenssl	0.14	Python wrapper module around the OpenSSL library / Apache
pyparsing	2.0.3	Python parsing module / MIT
pyqt	4.11.3	PyQt is a Python binding of the cross-platform GUI toolkit Qt / GPL
pyreadline Windows	2.0	A python implmementation of GNU readline. / BSD
pytables	3.1.1	brings together Python, HDF5 and NumPy to easily handle large amounts of data / BS
pytest	2.6.4	simple powerful testing with Python / MIT
python	2.7.9	general purpose programming language / PSF
python-dateutil	2.4.1	Extensions to the standard Python datetime module / BSD
pytz	2015.2	World timezone definitions, modern and historical / MIT
pywin32 Windows	219	Python extensions for Windows / PSF
pyyaml	3.11	YAML parser and emitter for Python / MIT
pyzmq	14.5.0	zeromq bindings for Python / LGPL and BSD
qt Linux Mac	4.8.6	Qt is a cross-platform application and UI framework / LGPL
readline Linux Mac	6.2	provides line-editing and for programs with a command-line interface / GPLv3
redis Linux Mac	2.6.9	Redis is an open source, BSD licensed, advanced key-value cache and store / 3-clause
redis-py Linux Mac	2.10.3	Redis Python Client / MIT
requests	2.6.0	Python HTTP for Humans / ISC
rope	0.9.4	a python refactoring library / GPL
runipy	0.1.3	Run IPython notebooks from the command line / BSD
scikit-image	0.11.2	Image processing routines for SciPy / 3-clause BSD
scikit-learn	0.15.2	A set of python modules for machine learning and data mining / 3-clause BSD
scipy	0.15.1	Scientific Library for Python / BSD
setuptools	14.3	Easily download, build, install, upgrade, and uninstall Python packages / PSF or ZPL
sip Linux Mac	4.16.5	/ GPL
six	1.9.0	Python 2 and 3 compatibility utilities / MIT
sockjs-tornado	1.0.1	SockJS python server implementation on top of Tornado framework / MIT
sphinx	1.2.3	Python documentation generator / BSD
spyder	2.3.4	Scientific PYthon Development EnviRonment / MIT
sqlalchemy	0.9.9	Database Abstraction Library / MIT
sqlite Linux Mac	3.8.4.1	implements a self-contained, zero-configuration, SQL database engine / Public-Domai
ssl_match_hostname	3.4.0.2	The ssl.match_hostname() function from Python 3.4 / PSF
statsmodels	0.6.1	Statistical computations and models for use with SciPy / 3-clause BSD
sympy	0.7.6	SymPy is a Python library for symbolic mathematics / 3-clause BSD
terminado Linux Mac	0.5	Terminals served to term.js using Tornado websockets / BSD
theano Linux	0.6.0	Optimizing compiler for evaluating mathematical expressions on CPUs and GPUs / BS
tk Linux Mac	8.5.18	powerful but easy to learn dynamic programming language / BSD-like
toolz	0.7.1	List processing tools and functional utilities / BSD
tornado	4.1	Tornado is a Python web framework and asynchronous networking library / Apache
ujson	1.33	Ultra fast JSON encoder and decoder for Python / BSD
unicodecsv	0.9.4	The unicodecsv file reads and decodes byte strings for you / BSD
util-linux Linux	2.21	Util-linux is a suite of essential utilities for any Linux system / GPL
werkzeug	0.10.1	The Swiss Army knife of Python web development / BSD
xlrd	0.9.3	Library for developers to extract data from Microsoft Excel spreadsheet files / BSD
xlsxwriter	0.6.7	A Python module for creating Excel XLSX files / BSD

continue

Table 212 – continued from previous page

Name	Version	Summary / License
xlwings Mac Windows	0.3.4	Make Excel fly. Interact with Excel from Python and vice versa / 3-clause BSD
xlwt	0.7.5	This package is for writing data and formatting information to Excel files / BSD
yaml Linux Mac	0.1.4	a human friendly data serialization standard for all programming languages / MIT
zeromq Linux Mac	4.0.4	a messaging system, or "message-oriented middleware" / LGPL
zlib Linux Mac	1.2.8	A Massively Spiffy Yet Delicately Unobtrusive Compression Library / zlib

Anaconda 2.1.0 (Sep 30, 2014)

Fixes:

- fixed the ability to compile C extensions in Python 3 using MinGW
- added missing lzma module to Python 3.3 and 3.4 (links to xz)
- added missing werkzeug/debug/shared package data to Werkzeug package

Enhancements:

- added statsmodel support for Python 3.4
- added LZO support for pytables on Linux
- added scikit-learn support for Python 3.4
- added Windows cffi support (in repository)
- added bsddb conda package on Linux to support Berkeley DB

Updates:

- bokeh from 0.4.4 to 0.6.1
- conda from 3.5.2 to 3.7.0
- conda-build from 1.3.3 to 1.8.2
- ipython from 2.1.0 to 2.2.0
- matplotlib from 1.3.1 to 1.4.0
- numba from 0.13.2 to 0.14.0
- numpy from 1.8.2 to 1.9.0
- pandas from 0.14.0 to 0.14.1
- python from 2.7.7 to 2.7.8
- requests from 2.3.0 to 2.4.1
- scikit-image from 0.10.0 to 0.10.1
- scikit-learn from 0.14.1 to 0.15.2
- spyder from 2.3.0rc1 to 2.3.1

Packages

Python 3.4

Name	Version	License
abstract-rendering Linux Mac	0.5.1	3rd-clause BSD
argcomplete	0.8.1	Apache Software License
astropy	0.4.2	BSD
beautiful-soup	4.3.2	PSF/MIT
binstar	0.7.1	BSD
bitarray	0.8.1	PSF
blaze	0.6.3	BSD
blz	0.6.2	BSD
bokeh	0.6.1	New BSD
boto	2.32.1	MIT
cffi	0.8.6	MIT
colorama	0.3.1	BSD
conda	3.7.0	BSD
conda-build	1.8.2	BSD
configobj	5.0.6	BSD
cryptography	0.5.4	Apache 2.0
curl Linux Mac	7.38.0	MIT/X derivate
cython	0.21	Apache 2.0
cytoolz	0.7.0	BSD
datashape	0.3.0	BSD
dateutil	2.1	BSD
decorator	3.4.0	BSD
docutils	0.12	Public-Domain, PSF, 2-clause BSD, GPL3
dynd-python	0.6.5	BSD
flask	0.10.1	BSD
freetype Linux Mac	2.4.10	FreeType License
future	0.13.1	MIT
greenlet	0.4.4	MIT
h5py	2.3.1	New BSD
hdf5 Linux Mac	1.8.13	BSD-style
ipython	2.2.0	BSD
itsdangerous	0.24	BSD License
jdcal	1.0	BSD
jinja2	2.7.3	BSD
jpeg Linux Mac	8d	Custom free software license
launcher Mac Windows	1.0.0	proprietary - Continuum Analytics, Inc.
libdynd Linux Mac	0.6.5	BSD
libffi Linux	3.0.13	MIT
libpng Linux Mac	1.5.13	Open Source
libsodium Linux Mac	0.4.5	MIT
libtiff Linux Mac	4.0.2	as-is
libxml2 Linux Mac	2.9.0	MIT
libxslt Linux Mac	1.1.28	MIT
llvm Linux Mac	3.3	Open Source
llvmpy	0.12.7	New BSD License
lxml	3.4.0	BSD

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Table 213 – continued from previous page

Name	Version	License
markupsafe	0.23	BSD
matplotlib	1.4.0	PSF-based
menuinst Windows	1.0.4	BDF
mingw Windows	4.7	GPL
mock	1.0.1	BSD
multipledispatch	0.4.7	BSD
networkx	1.9.1	BSD
nltk	3.0.0	Apache 2.0
node-webkit Mac Windows	0.10.1	MIT
nose	1.3.4	LGPL
numba	0.14.0	numba license
numexpr	2.3.1	MIT
numpy	1.9.0	BSD
openpyxl	1.8.5	MIT/Expat
openssl Linux Mac	1.0.1h	Apache-style
pandas	0.14.1	BSD
patsy	0.3.0	BSD License
pillow Linux Mac	2.5.1	Standard PIL license
pip	1.5.6	MIT
ply	3.4	BSD
psutil	2.1.1	BSD
py	1.4.25	MIT
pycosat	0.6.1	MIT
pycparser	2.10	BSD
pycrypto	2.6.1	Public Domain
pycurl Linux Mac	7.19.5	LGPL and MIT/X
pyflakes	0.8.1	MIT
pygments	1.6	BSD
pyopenssl	0.14	APL2
pyparsing	2.0.1	MIT
pyqt	4.10.4	GPL
pyreadline Windows	2.0	BSD
pytables	3.1.1	BSD
pytest	2.6.3	MIT
python	3.4.1	PSF
pytz	2014.7	MIT
pywin32 Windows	219	PSF
pyyaml	3.11	MIT
pyzmq	14.3.1	LGPL and BSD
qt Linux Mac	4.8.5	LGPL
readline Linux Mac	6.2	GPL 3
redis Linux Mac	2.6.9	3-clause BSD
redis-py Linux Mac	2.9.1	MIT
requests	2.4.1	ISC
rope	0.9.4	GPL
runipy	0.1.1	BSD
scikit-image	0.10.1	Modified BSD
scikit-learn	0.15.2	3-clause BSD
scipy	0.14.0	BSD
setuptools	5.8	PSF or ZPL

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Table 213 – continued from previous page

Name	Version	License
sip Linux Mac	4.15.5	GPL
six	1.8.0	MIT
sockjs-tornado	1.0.1	MIT
sphinx	1.2.3	BSD
spyder	2.3.1	MIT
sqlalchemy	0.9.7	MIT
sqlite Linux Mac	3.8.4.1	Public Domain
statsmodels	0.5.0	3-clause Modified BSD
sympy	0.7.5	New BSD
tk Linux Mac	8.5.15	BSD-style
toolz	0.7.0	BSD
tornado	4.0.2	Apache
ujson	1.33	BSD
util-linux Linux	2.21	GPL
werkzeug	0.9.6	BSD
xlrd	0.9.3	BSD
xlsxwriter	0.5.7	BSD
xz Linux Mac	5.0.5	Public Domain and GPL
yaml Linux Mac	0.1.4	MIT
zeromq Linux Mac	4.0.4	LGPL
zlib Linux Mac	1.2.7	zlib

Python 2.7

Name	Version	License
abstract-rendering Linux Mac	0.5.1	3rd-clause BSD
argcomplete	0.8.1	Apache Software License
astropy	0.4.2	BSD
atom	0.3.9	BSD
beautiful-soup	4.3.2	PSF/MIT
binstar	0.7.1	BSD
bitarray	0.8.1	PSF
blaze	0.6.3	BSD
blz	0.6.2	BSD
bokeh	0.6.1	New BSD
boto	2.32.1	MIT
cairo Linux	1.12.2	LGPL 2.1 and MPL 1.1
casuarius	1.1	LGPL
cdecimal	2.3	BSD
cffi	0.8.6	MIT
chaco	4.4.1	BSD
colorama	0.3.1	BSD
conda	3.7.0	BSD
conda-build	1.8.2	BSD
configobj	5.0.6	BSD
cryptography	0.5.4	Apache 2.0
curl Linux Mac	7.38.0	MIT/X derivate
cython	0.21	Apache 2.0

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Table 214 – continued from previous page

Name	Version	License
cytoolz	0.7.0	BSD
datashape	0.3.0	BSD
dateutil	2.1	BSD
decorator	3.4.0	BSD
docutils	0.12	Public-Domain, PSF, 2-clause BSD, GPL3
dynd-python	0.6.5	BSD
enable	4.3.0	BSD
enaml	0.9.8	BSD
flask	0.10.1	BSD
freetype Linux Mac	2.4.10	FreeType License
future	0.13.1	MIT
futures	2.1.6	BSD
gevent	1.0.1	MIT
gevent-websocket	0.9.3	Apache
greenlet	0.4.4	MIT
grin	1.2.1	BSD
h5py	2.3.1	New BSD
hdf5 Linux Mac	1.8.13	BSD-style
ipython	2.2.0	BSD
itsdangerous	0.24	BSD License
jdcal	1.0	BSD
jinja2	2.7.3	BSD
jpeg Linux Mac	8d	Custom free software license
kiwisolver	0.1.3	BSD
launcher Mac Windows	1.0.0	proprietary - Continuum Analytics, Inc.
lcms Linux Mac	1.19	MIT
libdynd Linux Mac	0.6.5	BSD
libffi Linux	3.0.13	MIT
libpng Linux Mac	1.5.13	Open Source
libsodium Linux Mac	0.4.5	MIT
libtiff Linux Mac	4.0.2	as-is
libxml2 Linux Mac	2.9.0	MIT
libxslt Linux Mac	1.1.28	MIT
llvm Linux Mac	3.3	Open Source
llvmpy	0.12.7	New BSD License
lxml	3.4.0	BSD
markupsafe	0.23	BSD
matplotlib	1.4.0	PSF-based
menuinst Windows	1.0.4	BDF
mingw Windows	4.7	GPL
mock	1.0.1	BSD
mpi4py Linux	1.3	BSD
mpich2 Linux	1.4.1p1	mpich license
multipledispatch	0.4.7	BSD
networkx	1.9.1	BSD
nltk	3.0.0	Apache 2.0
node-webkit Mac Windows	0.10.1	MIT
nose	1.3.4	LGPL
numba	0.14.0	numba license
numexpr	2.3.1	MIT

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Table 214 – continued from previous page

Name	Version	License
numpy	1.9.0	BSD
openpyxl	1.8.5	MIT/Expat
openssl Linux Mac	1.0.1h	Apache-style
pandas	0.14.1	BSD
patsy	0.3.0	BSD License
pep8	1.5.7	MIT License
pil	1.1.7	PIL license
pip	1.5.6	MIT
pixman Linux	0.26.2	MIT
ply	3.4	BSD
psutil	2.1.1	BSD
py	1.4.25	MIT
py2cairo Linux	1.10.0	LGPL 2.1 and MPL 1.1
pyaudio Mac	0.2.7	MIT
pycosat	0.6.1	MIT
pycparser	2.10	BSD
pycrypto	2.6.1	Public Domain
pycurl Linux Mac	7.19.5	LGPL and MIT/X
pyface	4.4.0	BSD
pyflakes	0.8.1	MIT
pygments	1.6	BSD
pyopenssl	0.14	APL2
pyparsing	2.0.1	MIT
pyqt	4.10.4	GPL
pyreadline Windows	2.0	BSD
pytables	3.1.1	BSD
pytest	2.6.3	MIT
python	2.7.8	PSF
pytz	2014.7	MIT
pywin32 Windows	219	PSF
pyyaml	3.11	MIT
pyzmq	14.3.1	LGPL and BSD
qt Linux Mac	4.8.5	LGPL
readline Linux Mac	6.2	GPL 3
redis Linux Mac	2.6.9	3-clause BSD
redis-py Linux Mac	2.9.1	MIT
requests	2.4.1	ISC
rope	0.9.4	GPL
runipy	0.1.1	BSD
scikit-image	0.10.1	Modified BSD
scikit-learn	0.15.2	3-clause BSD
scipy	0.14.0	BSD
setuptools	5.8	PSF or ZPL
sip Linux Mac	4.15.5	GPL
six	1.8.0	MIT
sockjs-tornado	1.0.1	MIT
sphinx	1.2.3	BSD
spyder	2.3.1	MIT
sqlalchemy	0.9.7	MIT
sqlite Linux Mac	3.8.4.1	Public Domain

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Table 214 – continued from previous page

Name	Version	License
ssl_match_hostname	3.4.0.2	PSF
statsmodels	0.5.0	3-clause Modified BSD
sympy	0.7.5	New BSD
theano Linux	0.6.0	BSD
tk Linux Mac	8.5.15	BSD-style
toolz	0.7.0	BSD
tornado	4.0.2	Apache
traits	4.4.0	BSD
traitsui	4.4.0	BSD
ujson	1.33	BSD
unicodecsv	0.9.4	BSD
util-linux Linux	2.21	GPL
werkzeug	0.9.6	BSD
xlrd	0.9.3	BSD
xlsxwriter	0.5.7	BSD
xlwings Windows	0.2.2	BSD 3-clause
xlwt	0.7.5	BSD
yaml Linux Mac	0.1.4	MIT
zeromq Linux Mac	4.0.4	LGPL
zlib Linux Mac	1.2.7	zlib

Anaconda 2.0.1 (Jun 12, 2014)

Fixes:

- added missing libpython (the so-called MinGW import library) for Python 3.4
- in order to make pandas.io.excel work, we downgraded openpyxl from 2.0.2 to 1.8.5
- added missing idle script on Windows

Updates:

- conda from 3.5.2 to 3.5.5
- conda-build from 1.3.3 to 1.3.5
- numba from 0.13.1 to 0.13.2
- pandas from 0.13.1 to 0.14.0
- python from 2.7.6 to 2.7.7
- scikit-image from 0.9.3 to 0.10.0

Packages

Python 3.4

Name	Version	License
argcomplete	0.6.7	Apache Software License
astropy	0.3.2	BSD
beautiful-soup	4.3.1	PSF/MIT
binstar	0.5.3	BSD
bitarray	0.8.1	PSF
blaze	0.5.0	BSD
blz	0.6.2	BSD
bokeh	0.4.4	New BSD
cdecimal	2.3	BSD
colorama	0.2.7	BSD
conda	3.5.5	BSD
conda-build	1.3.5	BSD
configobj	5.0.5	BSD
curl Linux Mac	7.30.0	MIT/X derivate
cython	0.20.1	Apache 2.0
datashape	0.2.0	BSD
dateutil	2.1	BSD
docutils	0.11	Public-Domain, PSF, 2-clause BSD, GPL3
dynd-python	0.6.2	BSD
flask	0.10.1	BSD
freetype Linux Mac	2.4.10	FreeType License
future	0.12.1	MIT
greenlet	0.4.2	MIT
h5py	2.3.0	New BSD
hdf5 Linux Mac	1.8.9	BSD-style
ipython	2.1.0	BSD
itsdangerous	0.24	BSD License
jdcal	1.0	BSD
jinja2	2.7.2	BSD
jpeg Linux Mac	8d	Custom free software license
libdynd Linux Mac	0.6.2	BSD
libpng Linux Mac	1.5.13	Open Source
libsodium Linux Mac	0.4.5	MIT
libtiff Linux Mac	4.0.2	as-is
libxml2 Linux Mac	2.9.0	MIT
libxslt Linux Mac	1.1.28	MIT
llvm Linux Mac	3.3	Open Source
llvmpy	0.12.6	New BSD License
lxml	3.3.5	BSD
markupsafe	0.18	BSD
matplotlib	1.3.1	PSF-based
menuinst Windows	1.0.3	BDF
mingw Windows	4.7	GPL
mock	1.0.1	BSD
multipledispatch	0.4.3	BSD
networkx	1.8.1	BSD

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Table 215 – continued from previous page

Name	Version	License
nose	1.3.3	LGPL
numba	0.13.2	numba license
numexpr	2.3.1	MIT
numpy	1.8.1	BSD
openpyxl	1.8.5	MIT/Expat
openssl Linux Mac	1.0.1h	Apache-style
pandas	0.14.0	BSD
patsy	0.2.1	BSD License
pillow Linux Mac	2.4.0	Standard PIL license
pip	1.5.6	MIT
ply	3.4	BSD
psutil	2.1.1	BSD
py	1.4.20	MIT
pycosat	0.6.1	MIT
pycparser	2.10	BSD
pycrypto	2.6.1	Public Domain
pyflakes	0.8.1	MIT
pygments	1.6	BSD
pyparsing	2.0.1	MIT
pyqt	4.10.4	GPL
pyreadline Windows	2.0	BSD
pytables	3.1.1	BSD
pytest	2.5.2	MIT
python	3.4.1	PSF
pytz	2014.3	MIT
pyyaml	3.11	MIT
pyzmq	14.3.0	LGPL and BSD
qt Linux Mac	4.8.5	LGPL
readline Linux Mac	6.2	GPL 3
redis Linux Mac	2.6.9	3-clause BSD
redis-py Linux Mac	2.9.1	MIT
requests	2.3.0	ISC
rope	0.9.4	GPL
runipy	0.1.0	BSD
scikit-image	0.10.0	Modified BSD
scipy	0.14.0	BSD
setuptools	3.6	PSF or ZPL
sip Linux Mac	4.15.5	GPL
six	1.6.1	MIT
sphinx	1.2.2	BSD
spyder	2.3.0rc1	MIT
sqlalchemy	0.9.4	MIT
sqlite Linux Mac	3.8.4.1	Public Domain
ssl_match_hostname	3.4.0.2	PSF
sympy	0.7.5	New BSD
tk Linux Mac	8.5.15	BSD-style
tornado	3.2.1	Apache
ujson	1.33	BSD
util-linux Linux	2.21	GPL
werkzeug	0.9.6	BSD

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Table 215 – continued from previous page

Name	Version	License
xlrd	0.9.3	BSD
xlsxwriter	0.5.5	BSD
yaml Linux Mac	0.1.4	MIT
zeromq Linux Mac	4.0.4	LGPL
zlib Linux Mac	1.2.7	zlib

Python 2.7

Name	Version	License
argcomplete	0.6.7	Apache Software License
astropy	0.3.2	BSD
atom	0.3.7	BSD
beautiful-soup	4.3.1	PSF/MIT
binstar	0.5.3	BSD
bitarray	0.8.1	PSF
blaze	0.5.0	BSD
blz	0.6.2	BSD
bokeh	0.4.4	New BSD
boto	2.28.0	MIT
cairo Linux	1.12.2	LGPL 2.1 and MPL 1.1
casuarius	1.1	LGPL
cdecimal	2.3	BSD
chaco	4.4.1	BSD
colorama	0.2.7	BSD
conda	3.5.5	BSD
conda-build	1.3.5	BSD
configobj	5.0.5	BSD
cubes	0.10.2	MIT
curl Linux Mac	7.30.0	MIT/X derivate
cython	0.20.1	Apache 2.0
datashape	0.2.0	BSD
dateutil	2.1	BSD
docutils	0.11	Public-Domain, PSF, 2-clause BSD, GPL3
dynd-python	0.6.2	BSD
enable	4.3.0	BSD
enaml	0.9.1	BSD
flask	0.10.1	BSD
freetype Linux Mac	2.4.10	FreeType License
future	0.12.1	MIT
gevent	1.0.1	MIT
gevent-websocket	0.9.3	Apache
greenlet	0.4.2	MIT
grin	1.2.1	BSD
h5py	2.3.0	New BSD
hdf5 Linux Mac	1.8.9	BSD-style
ipython	2.1.0	BSD
itsdangerous	0.24	BSD License
jdcal	1.0	BSD

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Table 216 – continued from previous page

Name	Version	License
jinja2	2.7.2	BSD
jpeg Linux Mac	8d	Custom free software license
kiwisolver	0.1.2	BSD
launcher	0.1.5	proprietary - Continuum Analytics, Inc.
lcms Linux Mac	1.19	MIT
libdynd Linux Mac	0.6.2	BSD
libpng Linux Mac	1.5.13	Open Source
libsodium Linux Mac	0.4.5	MIT
libtiff Linux Mac	4.0.2	as-is
libxml2 Linux Mac	2.9.0	MIT
libxslt Linux Mac	1.1.28	MIT
llvm Linux Mac	3.3	Open Source
llvmpy	0.12.6	New BSD License
lxml	3.3.5	BSD
markupsafe	0.18	BSD
matplotlib	1.3.1	PSF-based
menuinst Windows	1.0.3	BDF
mingw Windows	4.7	GPL
mock	1.0.1	BSD
mpi4py Linux	1.3	BSD
mpich2 Linux	1.4.1p1	mpich license
multipledispatch	0.4.3	BSD
networkx	1.8.1	BSD
nltk	2.0.4	Apache 2.0
nose	1.3.3	LGPL
numba	0.13.2	numba license
numexpr	2.3.1	MIT
numpy	1.8.1	BSD
openpyxl	1.8.5	MIT/Expat
openssl Linux Mac	1.0.1h	Apache-style
pandas	0.14.0	BSD
patsy	0.2.1	BSD License
pep8	1.5.6	MIT License
pil	1.1.7	PIL license
pip	1.5.6	MIT
pixman Linux	0.26.2	MIT
ply	3.4	BSD
psutil	2.1.1	BSD
py	1.4.20	MIT
py2cairo Linux	1.10.0	LGPL 2.1 and MPL 1.1
pyaudio Mac	0.2.7	MIT
pycosat	0.6.1	MIT
pycparser	2.10	BSD
pycrypto	2.6.1	Public Domain
pycurl Linux Mac	7.19.3.1	LGPL and MIT/X
pyface	4.4.0	BSD
pyflakes	0.8.1	MIT
pygments	1.6	BSD
pyparsing	2.0.1	MIT
pyqt	4.10.4	GPL

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Table 216 – continued from previous page

Name	Version	License
pyreadline Windows	2.0	BSD
pytables	3.1.1	BSD
pytest	2.5.2	MIT
python	2.7.7	PSF
pytz	2014.3	MIT
pywin32 Windows	218.4	PSF
pyyaml	3.11	MIT
pyzmq	14.3.0	LGPL and BSD
qt Linux Mac	4.8.5	LGPL
readline Linux Mac	6.2	GPL 3
redis Linux Mac	2.6.9	3-clause BSD
redis-py Linux Mac	2.9.1	MIT
requests	2.3.0	ISC
rope	0.9.4	GPL
runipy	0.1.0	BSD
scikit-image	0.10.0	Modified BSD
scikit-learn	0.14.1	3-clause BSD
scipy	0.14.0	BSD
setuptools	3.6	PSF or ZPL
sip Linux Mac	4.15.5	GPL
six	1.6.1	MIT
sphinx	1.2.2	BSD
spyder	2.3.0rc1	MIT
sqlalchemy	0.9.4	MIT
sqlite Linux Mac	3.8.4.1	Public Domain
ssl_match_hostname	3.4.0.2	PSF
statsmodels	0.5.0	3-clause Modified BSD
sympy	0.7.5	New BSD
theano Linux	0.6.0	BSD
tk Linux Mac	8.5.15	BSD-style
tornado	3.2.1	Apache
traits	4.4.0	BSD
traitsui	4.4.0	BSD
ujson	1.33	BSD
util-linux Linux	2.21	GPL
werkzeug	0.9.6	BSD
xlrd	0.9.3	BSD
xlsxwriter	0.5.5	BSD
xlwings Windows	0.1.0	BSD 3-clause
xlwt	0.7.5	BSD
yaml Linux Mac	0.1.4	MIT
zeromq Linux Mac	4.0.4	LGPL
zlib Linux Mac	1.2.7	zlib

Anaconda 2.0.0 (May 28, 2014)

Fixes:

- on Windows the /D option of the executable installer is now working
- added missing TkAgg matplotlib backend on Windows
- added missing osgeo._gdal_array extension to GDAL
- fixed rope on Python 3

Known issues:

- even though the matplotlib tkagg backend is now supported on all platforms and with all Python versions now, there might be problems on Windows with Python 3.4
- the Windows file association ('.py'-files being executed by the Anaconda Python interpreter) is not working

Enhancements:

- switched from using PySide to PyQt as the default Qt binding
- added lcms to PIL on Unix
- added ability to copy files upon install when filesystem fails to create hard links
- added netCDF4 support on 64-bit Windows
- on macOS, Tk in now linked to Cocoa (instead of X11)

Major package updates:

- conda from 3.0.6 to 3.5.2
- conda-build from 1.2.0 to 1.3.3
- ipython from 1.1.0 to 2.1.0
- numba from 0.12.1 to 0.13.1
- numpy from 1.8.0 to 1.8.1
- requests from 2.2.1 to 2.3.0
- scipy from 0.13.3 to 0.14.0
- spyder from 2.2.5 to 2.3.0rc1
- sympy from 0.7.4.1 to 0.7.5
- python from 3.3.4 to 3.4.1

Anaconda 1.9.2 (Apr 09, 2014)

Fixes:

- updated to openssl 1.0.1g on Unix to fix the "Heartbleed bug" of the TLS Heartbeat Extension problem (reported in the news)
- fixed /D option in silent mode for Windows installer

Updates:

- openssl from 1.0.1c to 1.0.1g
- conda from 3.0.6 to 3.4.1

- conda-build from 1.2.0 to 1.3.1

Packages

Python 2.7

Included in installer

- apptools 4.2.1
- argcomplete 0.6.7
- astropy 0.3.0
- atom 0.3.7
- beautiful-soup 4.3.1
- binstar 0.4.4
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.2
- blz 0.6.1
- bokeh 0.4.1
- boto 2.25.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- chaco 4.4.1
- colorama 0.2.7
- conda 3.4.1
- conda-build 1.3.1
- configobj 4.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.1
- enable 4.3.0
- enaml 0.9.1
- envisage 4.4.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- keyring 3.3
- kiwisolver 0.1.2
- launcher 0.1.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1
- mayavi 4.3.1
- mdp 3.3
- menuinst 1.0.3 *W*
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- opencv 2.4.6 *L*
- openpyxl 1.8.2
- openssl 1.0.1g *LM*
- pandas 0.13.1
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyface 4.4.0
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysal 1.6.0
- pysam 0.6 *LM*
- pyside 1.2.1
- pytables 3.1.0
- pytest 2.5.2
- python 2.7.6
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.8.5
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- rope 0.9.4
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- spyder 2.2.5
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tk 8.5.13 *LM*
- tornado 3.2.0
- traits 4.4.0
- traitsui 4.4.0
- ujson 1.33
- vtk 5.10.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- argcomplete 0.6.7
- astropy 0.3.0
- beautiful-soup 4.3.1
- bitarray 0.8.1
- blaze 0.4.2
- blz 0.6.1
- bokeh 0.4.1
- cdecimal 2.3
- colorama 0.2.7
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- docutils 0.11
- dynd-python 0.6.1
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- greenlet 0.4.2
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- openpyxl 1.8.2
- openssl 1.0.1g *LM*
- pandas 0.13.1
- patsy 0.2.1
- pillow 2.1.0
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pyside 1.2.1 *W*
- pytables 3.1.0
- pytest 2.5.2
- python 3.3.4
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- tk 8.5.13 *LM*
- tornado 3.2.0
- ujson 1.33
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Python 2.6

Available through conda

- argcomplete 0.6.7
- argparse 1.2.1
- astropy 0.3.0
- atom 0.3.7
- beautiful-soup 4.3.1
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.2 *LM*
- blz 0.6.1
- boto 2.25.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- colorama 0.2.7
- configobj 4.7.2
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.1
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- kiwisolver 0.1.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- opencv 2.4.6 *L*
- openssl 1.0.1g *LM*
- ordereddict 1.1
- pandas 0.13.1
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysam 0.6 *LM*
- pytables 3.1.0 *LM*
- pytest 2.5.2
- python 2.6.9
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tk 8.5.13 *LM*
- tornado 3.2.0
- traits 4.4.0
- ujson 1.33
- unittest2 0.5.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.9.1 (Feb 20, 2014)

Fixes:

- openpyxl to depend on up-to-date version of lxml
- added missing MSVCP (both for 2008 and 2010) DLLs to Windows installers which fixes issues with the user install mode on some systems

Updates:

- conda from 3.0.3 to 3.0.6
- conda-build from 1.1.0 to 1.2.0
- numba from 0.12.0 to 0.12.1

- pandas from 0.13.0 to 0.13.1
- python from 3.3.3 to 3.3.4

Added:

- added Py3k support for h5py
- netcdf4 on 32-bit Windows
- xlsxwriter 0.5.2

Packages

Python 2.7

Included in installer

- apptools 4.2.1
- argcomplete 0.6.7
- astropy 0.3.0
- atom 0.3.7
- beautiful-soup 4.3.1
- binstar 0.4.4
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.2
- blz 0.6.1
- bokeh 0.4.1
- boto 2.25.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- chaco 4.4.1
- colorama 0.2.7
- conda 3.0.6
- conda-build 1.2.0
- configobj 4.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.1
- enable 4.3.0
- enaml 0.9.1
- envisage 4.4.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- keyring 3.3
- kiwisolver 0.1.2
- launcher 0.1.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1
- mayavi 4.3.1
- mdp 3.3
- menuinst 1.0.3 *W*
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- opencv 2.4.6 *L*
- openpyxl 1.8.2
- openssl 1.0.1c *LM*
- pandas 0.13.1
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyface 4.4.0
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysal 1.6.0
- pysam 0.6 *LM*
- pyside 1.2.1
- pytables 3.1.0
- pytest 2.5.2
- python 2.7.6
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.8.5
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- rope 0.9.4
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- spyder 2.2.5
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tk 8.5.13 *LM*
- tornado 3.2.0
- traits 4.4.0
- traitsui 4.4.0
- ujson 1.33
- vtk 5.10.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- argcomplete 0.6.7
- astropy 0.3.0
- beautiful-soup 4.3.1
- bitarray 0.8.1
- blaze 0.4.2
- blz 0.6.1
- bokeh 0.4.1
- cdecimal 2.3
- colorama 0.2.7
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- docutils 0.11
- dynd-python 0.6.1
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- greenlet 0.4.2
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- openpyxl 1.8.2
- openssl 1.0.1c *LM*
- pandas 0.13.1
- patsy 0.2.1
- pillow 2.1.0
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pyside 1.2.1 *W*
- pytables 3.1.0
- pytest 2.5.2
- python 3.3.4
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- tk 8.5.13 *LM*
- tornado 3.2.0
- ujson 1.33
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Python 2.6

Available through conda

- argcomplete 0.6.7
- argparse 1.2.1
- astropy 0.3.0
- atom 0.3.7
- beautiful-soup 4.3.1
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.2 *LM*
- blz 0.6.1
- boto 2.25.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- colorama 0.2.7
- configobj 4.7.2
- curl 7.30.0 *LM*
- cython 0.20.1
- datashape 0.1.1
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.1
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- kiwisolver 0.1.2
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.3
- lxml 3.3.1
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.8 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.1
- numexpr 2.3.1
- numpy 1.8.0
- opencv 2.4.6 *L*
- openssl 1.0.1c *LM*
- ordereddict 1.1
- pandas 0.13.1
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.2.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysam 0.6 *LM*
- pytables 3.1.0 *LM*
- pytest 2.5.2
- python 2.6.9
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.2
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tk 8.5.13 *LM*
- tornado 3.2.0
- traits 4.4.0
- ujson 1.33
- unittest2 0.5.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlsxwriter 0.5.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.9.0 (Feb 10, 2014)

Highlights:

- NumPy updated to version 1.8
- updates to about 35 packages, including Bokeh and Blaze
- added 10 new packages

Enhancements:

- use MSVC 2010 to compile Python 3 and C extensions on Windows
- remove distribute in favor of setuptools
- enable threadsafe when building HDF5 on Linux
- renamed the Python Imaging Library (PIL) from imaging to pil

- updated EULA

Fixes:

- ssl bindings in Python standard library on macOS
- Windows installers not working properly when PYTHONHOME is set

Updated:

- conda from 2.0.4 to 3.0.3
- numba from 0.11.0 to 0.12.0
- numpy from 1.7.1 to 1.8.0
- pandas from 0.12.0 to 0.13.0
- python from 2.7.5 to 2.7.6
- requests 1.2.3 to 2.2.1
- scipy from 0.13.0 to 0.13.2
- sympy from 0.7.3 to 0.7.4.1

Added:

- argcomplete 0.6.7
- blz 0.6.1
- cdecimal 2.3
- conda-build 1.1.0
- datashape 0.1.0
- future 0.11.2
- kiwisolver 0.1.2
- mock 1.0.1
- setuptools 2.1
- ssl_match_hostname 3.4.0.2
- ujson 1.33
- scikit-learn and redis-py support for Python 3
- added traits and unittest2 support for Python 2.6

Removed:

- distribute
- llvmmath
- meta

Packages

Python 2.7

Included in installer

- apptools 4.2.1
- argcomplete 0.6.7
- astropy 0.3.0
- atom 0.3.6
- beautiful-soup 4.3.1
- binstar 0.4.4
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.1
- blz 0.6.1
- bokeh 0.4
- boto 2.24.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- chaco 4.4.1
- colorama 0.2.7
- conda 3.0.3
- conda-build 1.1.0
- configobj 4.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.20
- datashape 0.1.0
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.0
- enable 4.3.0
- enaml 0.9.0
- envisage 4.4.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- keyring 3.3
- kiwisolver 0.1.2
- launcher 0.1.2
- libdynd 0.6.0 *LM*
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.2
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1
- mayavi 4.3.1
- mdp 3.3
- menuinst 1.0.3 *W*
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.7 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.0
- numexpr 2.3.0
- numpy 1.8.0
- opencv 2.4.6 *L*
- openpyxl 1.8.2
- openssl 1.0.1c *LM*
- pandas 0.13.0
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyface 4.4.0
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.1.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysal 1.6.0
- pysam 0.6 *LM*
- pyside 1.2.1
- pytables 3.1.0
- pytest 2.5.2
- python 2.7.6
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.8.5
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- rope 0.9.4
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.1
- six 1.5.2
- sphinx 1.2.1
- spyder 2.2.5
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tk 8.5.13 *LM*
- tornado 3.2.0
- traits 4.4.0
- traitsui 4.4.0
- ujson 1.33
- vtk 5.10.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- argcomplete 0.6.7
- astropy 0.3.0
- beautiful-soup 4.3.1
- bitarray 0.8.1
- blaze 0.4.1
- blz 0.6.1
- bokeh 0.4
- cdecimal 2.3
- colorama 0.2.7
- curl 7.30.0 *LM*
- cython 0.20
- datashape 0.1.0
- dateutil 2.1
- docutils 0.11
- dynd-python 0.6.0
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- greenlet 0.4.2
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- libdynd 0.6.0 *LM*
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.2
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- netcdf4 1.0.7 *LM*
- networkx 1.8.1
- nose 1.3.0
- numba 0.12.0
- numexpr 2.3.0
- numpy 1.8.0
- openpyxl 1.8.2
- pandas 0.13.0
- patsy 0.2.1
- pillow 2.1.0
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.1.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pyside 1.1.2 *W*
- pytables 3.1.0
- pytest 2.5.2
- python 3.3.3
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.1
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- tornado 3.2.0
- ujson 1.33
- werkzeug 0.9.4
- xlrd 0.9.2
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Python 2.6

Available through conda

- argcomplete 0.6.7
- argparse 1.2.1
- astropy 0.3.0
- atom 0.3.6
- beautiful-soup 4.3.1
- biopython 1.63
- bitarray 0.8.1
- blaze 0.4.1
- blz 0.6.1
- boto 2.24.0
- cairo 1.12.2 *L*
- casuarius 1.1
- cdecimal 2.3
- colorama 0.2.7
- configobj 4.7.2
- curl 7.30.0 *LM*
- cython 0.20
- datashape 0.1.0
- dateutil 2.1
- disco 0.4.4 *L*
- docutils 0.11
- dynd-python 0.6.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- future 0.11.2
- gevent 1.0
- gevent-websocket 0.9.2
- gevent_zeromq 0.2.5
- greenlet 0.4.2
- grin 1.2.1
- h5py 2.2.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.2
- kiwisolver 0.1.2
- libdynd 0.6.0 *LM*
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libsodium 0.4.5 *L*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmpy 0.12.2
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mock 1.0.1
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.7 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.12.0
- numexpr 2.3.0
- numpy 1.8.0
- opencv 2.4.6 *L*
- ordereddict 1.1
- pandas 0.13.0
- patsy 0.2.1
- pep8 1.4.6
- pil 1.1.7
- pip 1.5.2
- ply 3.4
- psutil 1.2.1
- py 1.4.20
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.10
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.1.0
- pyparsing 2.0.1
- pyreadline 2.0 *W*
- pysam 0.6 *LM*
- pytables 3.1.0 *LM*
- pytest 2.5.2
- python 2.6.9
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.9.1 *LM*
- requests 2.2.1
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.3
- setuptools 2.1
- six 1.5.2
- sphinx 1.2.1
- sqlalchemy 0.9.2
- ssl_match_hostname 3.4.0.2
- statsmodels 0.5.0
- sympy 0.7.4.1
- theano 0.6.0 *L*
- tornado 3.2.0
- traits 4.4.0
- ujson 1.33
- unittest2 0.5.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.8.0 (Nov 05, 2013)

Enhancements:

- on Windows the installer now allows installing in user mode without having system administrator privileges
- use RPATH (instead of RUNPATH) on Linux, which fixes link problems when LD_LIBRARY_PATH is set
- added ipython-notebook meta package for all supported Python versions
- removed curl binary on macOS, to avoid superseding system curl

Fixes:

- wrong location of VTK libraries in VTKTargets-debug.cmake on Linux
- fix python.app problem related to adding the symlink to lib, which also appears to create problems with %%cython magic in ipython

- apply patch to Mayavi, which foxes running mlab scripts

Updated:

- conda from 1.9.1 to 2.0.4
- ipython 1.0.0 to 1.1.0
- matplotlib from 1.3.0 to 1.3.1
- numba from 0.10.2 to 0.11.0
- scikit-image from 0.8.2 to 0.9.3
- scipy from 0.12.0 to 0.13.0
- sypder from 2.2.4 to 2.2.5

Added:

- blaze 0.3
- pykit 0.1
- beautiful-soup 4.3.1
- openpyxl 1.6.2

Packages

Python 2.7

Included in installer

- apptools 4.2.0
- astropy 0.2.5
- atom 0.3.4
- beautiful-soup 4.3.1
- binstar 0.3.1
- biopython 1.62
- bitarray 0.8.1
- blaze 0.3
- bokeh 0.2
- boto 2.15.0
- cairo 1.12.2 *L*
- casuarius 1.1
- chaco 4.3.0
- colorama 0.2.7
- configobj 4.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.19.2
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.5.0
- enable 4.3.0
- enaml 0.8.3
- envisage 4.3.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.2.0
- hdf5 1.8.9
- imaging 1.1.7
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.1
- keyring 3.2
- launcher 0.1.2
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1
- mayavi 4.3.0
- mdp 3.3
- menuinst 1.0.3 *W*
- meta 0.4.2.dev
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.6 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.11.0
- numexpr 2.2.2
- numpy 1.7.1
- opencv 2.4.6 *L*
- openpyxl 1.6.2
- pandas 0.12.0
- patsy 0.2.1
- pep8 1.4.6
- pip 1.4.1
- ply 3.4
- psutil 1.1.2
- py 1.4.17
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyface 4.3.0
- pyflakes 0.7.3
- pygments 1.6
- pykit 0.1.0
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pysal 1.6.0
- pysam 0.6 *LM*
- pyside 1.2.1
- pytables 3.0.0
- pytest 2.4.2
- python 2.7.5
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.8.5
- redis 2.6.9 *LM*
- redis-py 2.7.2 *LM*
- requests 1.2.3
- rope 0.9.4
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.0
- six 1.4.1
- sphinx 1.1.3
- spyder 2.2.5
- sqlalchemy 0.8.3
- statsmodels 0.5.0
- sympy 0.7.3
- theano 0.5.0 *L*
- tornado 3.1.1
- traits 4.3.0
- traitsui 4.3.0
- vtk 5.10.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- astropy 0.2.5
- beautiful-soup 4.3.1
- bitarray 0.8.1
- colorama 0.2.7
- curl 7.30.0 *LM*
- cython 0.19.2
- dateutil 2.1
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.5.0
- flask 0.10.1
- freetype 2.4.10
- greenlet 0.4.1
- hdf5 1.8.9
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.1
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1
- mdp 3.3
- mingw 4.7 *W*
- netcdf4 1.0.6 *LM*
- networkx 1.8.1
- nose 1.3.0
- numba 0.11.0
- numexpr 2.2.2
- numpy 1.7.1
- openpyxl 1.6.2
- pandas 0.12.0
- patsy 0.2.1
- pillow 2.1.0
- pip 1.4.1
- ply 3.4
- psutil 1.1.2
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6.1
- pyflakes 0.7.3
- pygments 1.6
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pyside 1.2.1 *W*
- pytables 3.0.0
- python 3.3.2
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- requests 1.2.3
- scikit-image 0.9.3
- scipy 0.13.0
- six 1.4.1
- sphinx 1.1.3
- sqlalchemy 0.8.3
- statsmodels 0.5.0
- sympy 0.7.3
- tornado 3.1.1
- werkzeug 0.9.4
- xlrd 0.9.2
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Python 2.6

Available through conda

- argparse 1.2.1
- astropy 0.2.5
- atom 0.3.4
- beautiful-soup 4.3.1
- biopython 1.62
- bitarray 0.8.1
- boto 2.15.0
- cairo 1.12.2 *L*
- casuarius 1.1
- colorama 0.2.7
- configobj 4.7.2
- curl 7.30.0 *LM*
- cython 0.19.2
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.5.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.2.0
- hdf5 1.8.9
- imaging 1.1.7
- ipython 1.1.0
- itsdangerous 0.23
- jinja2 2.7.1
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.6 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.11.0
- numexpr 2.2.2
- numpy 1.7.1
- opencv 2.4.6 *L*
- ordereddict 1.1
- pandas 0.12.0
- patsy 0.2.1
- pep8 1.4.6
- pip 1.4.1
- ply 3.4
- psutil 1.1.2
- py 1.4.17
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6.1
- pycurl 7.19.0 *LM*
- pyflakes 0.7.3
- pygments 1.6
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pysam 0.6 *LM*
- pytables 3.0.0 *LM*
- pytest 2.4.2
- python 2.6.9
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.7.2 *LM*
- requests 1.2.3
- scikit-image 0.9.3
- scikit-learn 0.14.1
- scipy 0.13.0
- six 1.4.1
- sphinx 1.1.3
- sqlalchemy 0.8.3
- statsmodels 0.5.0
- sympy 0.7.3 *LM*
- theano 0.5.0 *L*
- tornado 3.1.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- yaml 0.1.4 *LM*
- zeromq 2.2.0 *LM*
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.7.0 (Sep 10, 2013)

Highlights:

- added VTK, Mayavi and Bokeh
- updated to new ipython 1.0 and matplotlib 1.3, and llvm 3.3
- many improvements and bug fixes to conda

Enhancements:

- removed conda as a direct anaconda dependency
- add MinGW runtime DLLs to Scripts directory on Windows
- fixed python-dateutil for Python 2

Updated:

- conda from 1.7.2 to 1.9.1
- ipython from 0.13.2 to 1.0.0

- matplotlib from 1.2.1 to 1.3.0
- numba from 0.9.0 to 0.10.2
- pandas from 0.11.0 to 0.12.0
- scikit-learn from 0.13.1 to 0.14.1
- spyder from 2.2.0 to 2.2.4
- sympy from 0.7.2 to 0.7.3

Added:

- bokeh 0.1.1
- chaco 4.3.0
- configobj 4.7.2
- markupsafe 0.18
- mayavi 4.3.0
- patsy 0.2.1
- traits 4.3.0
- vtk 5.10.1

Packages

Python 2.7

Available in the installer

- apptools 4.2.0
- astropy 0.2.4
- atom 0.3.2
- binstar 0.3.1
- biopython 1.61
- bitarray 0.8.1
- bokeh 0.1.1
- boto 2.12.0
- cairo 1.12.2 *L*
- casuarius 1.1
- chaco 4.3.0
- configobj 4.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.4.2
- enable 4.3.0
- enaml 0.7.19
- envisage 4.3.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.2.0
- hdf5 1.8.9
- imaging 1.1.7
- ipython 1.0.0
- itsdangerous 0.23
- jinja2 2.7.1
- keyring 3.0.1
- launcher 0.1.2
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.0
- mayavi 4.3.0
- mdp 3.3
- menuinst 1.0.1 *W*
- meta 0.4.2.dev
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.5 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.10.2
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.6 *L*
- pandas 0.12.0
- patsy 0.2.1
- pep8 1.4.6
- pip 1.4.1
- ply 3.4
- psutil 1.0.1
- py 1.4.14
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyface 4.3.0
- pyflakes 0.7.3
- pygments 1.6
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pysal 1.6.0
- pysam 0.6 *LM*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.5
- python 2.7.5
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis-py 2.7.2 *LM*
- requests 1.2.3
- rope 0.9.4
- scikit-image 0.8.2
- scikit-learn 0.14.1
- scipy 0.12.0
- six 1.4.1
- sphinx 1.1.3
- spyder 2.2.4
- sqlalchemy 0.8.2
- statsmodels 0.5.0
- sympy 0.7.3
- theano 0.5.0 *L*
- tornado 3.1.1
- traits 4.3.0
- traitsui 4.3.0
- vtk 5.10.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- astropy 0.2.4
- bitarray 0.8.1
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.4.2
- flask 0.10.1
- freetype 2.4.10
- greenlet 0.4.1
- hdf5 1.8.9
- ipython 1.0.0
- itsdangerous 0.23
- jinja2 2.7.1
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.0
- mdp 3.3
- mingw 4.7 *W*
- netcdf4 1.0.5 *LM*
- networkx 1.8.1
- nose 1.3.0
- numba 0.10.2
- numpy 1.7.1
- pandas 0.12.0
- patsy 0.2.1
- pillow 2.1.0
- pip 1.4.1
- ply 3.4
- psutil 1.0.1
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pyflakes 0.7.3
- pygments 1.6
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pyside 1.1.2 *W*
- python 3.3.2
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- requests 1.2.3
- scikit-image 0.8.2
- scipy 0.12.0
- six 1.4.1
- sphinx 1.1.3
- sqlalchemy 0.8.2
- statsmodels 0.5.0
- sympy 0.7.3
- tornado 3.1.1
- werkzeug 0.9.4
- xlrd 0.9.2
- zlib 1.2.7

Python 2.6

Available through conda

- argparse 1.2.1
- astropy 0.2.4
- atom 0.3.2
- biopython 1.61
- bitarray 0.8.1
- boto 2.12.0
- cairo 1.12.2 *L*
- casuarius 1.1
- configobj 4.7.2
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.11
- dynd-python 0.4.2
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.2.0
- hdf5 1.8.9
- imaging 1.1.7
- ipython 1.0.0
- itsdangerous 0.23
- jinja2 2.7.1
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13 *LM*
- libtiff 4.0.2 *LM*
- libxml2 2.9.0 *LM*
- libxslt 1.1.28 *LM*
- llvm 3.3
- llvmmath 0.1.1
- llvmpy 0.12.0
- lxml 3.2.3
- markupsafe 0.18
- matplotlib 1.3.0 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.5 *LM*
- networkx 1.8.1
- nltk 2.0.4
- nose 1.3.0
- numba 0.10.2
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.6 *L*
- ordereddict 1.1
- pandas 0.12.0
- patsy 0.2.1
- pep8 1.4.6
- pip 1.4.1
- ply 3.4
- psutil 1.0.1
- py 1.4.14
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.7.3
- pygments 1.6
- pyparsing 1.5.6
- pyreadline 2.0.dev *W*
- pysam 0.6 *LM*
- pytables 2.4.0 *LM*
- pytest 2.3.5
- python 2.6.8
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis-py 2.7.2 *LM*
- requests 1.2.3
- scikit-image 0.8.2
- scikit-learn 0.14.1
- scipy 0.12.0
- six 1.4.1
- sphinx 1.1.3
- sqlalchemy 0.8.2
- statsmodels 0.5.0
- sympy 0.7.3 *LM*
- theano 0.5.0 *L*
- tornado 3.1.1
- werkzeug 0.9.4
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.6.2 (Jul 09, 2013) (Windows only)

- Fixed path being incorrectly appended on Windows during install

Anaconda 1.6.1 (Jul 03, 2013)

- fixed .pkg installer
- updated binstar from 0.1.1 to 0.1.2 (fixes upload on Windows)
- updated conda from 1.7.1 to 1.7.2 (fixes updating python.app on macOS)
- updated dynd from 0.3.0 to 0.4.0
- updated launcher from 0.1.1 to 0.1.2
- added missing pydoc command on Unix
- macOS: fix hard coded build prefix in .dylib files for may other libraries
- Windows: append instead of prepend path on Windows

Packages

Python 2.7

Included in installer

- astropy 0.2.3
- atom 0.2.3
- binstar 0.1.2
- biopython 1.61
- bitarray 0.8.1
- boto 2.9.6
- cairo 1.12.2 *L*
- casuarius 1.1
- conda 1.7.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.10
- dynd-python 0.4.0
- enaml 0.7.6
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.2
- itsdangerous 0.21
- jinja2 2.6
- keyring 1.4
- launcher 0.1.2
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmmath 0.1.0
- llvmpy 0.11.3
- lxml 3.2.1
- matplotlib 1.2.1
- mdp 3.3
- menuinst 1.0.1 *W*
- meta 0.4.2.dev
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nltk 2.0.4
- nose 1.3.0
- numba 0.9.0
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.2 *L*
- pandas 0.11.0
- pep8 1.4.5
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- py 1.4.14
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.7.2
- pygments 1.6
- pyparsing 1.5.6
- pysal 1.5.0
- pysam 0.6 *LM*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.5
- python 2.7.5
- pytz 2013b
- pywin32 218.4 *W*
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis-py 2.7.2 *LM*
- requests 1.2.3
- rope 0.9.4
- scikit-image 0.8.2
- scikit-learn 0.13.1
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- spyder 2.2.0
- sqlalchemy 0.8.1
- statsmodels 0.4.3
- sympy 0.7.2
- theano 0.5.0 *L*
- tornado 3.1
- werkzeug 0.9.1
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- astropy 0.2.3
- bitarray 0.8.1
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- distribute 0.6.45
- docutils 0.10
- dynd-python 0.4.0
- freetype 2.4.10
- greenlet 0.4.1
- hdf5 1.8.9
- ipython 0.13.2
- jinja2 2.6
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmmath 0.1.0
- llvmpy 0.11.3
- lxml 3.2.1
- matplotlib 1.2.1
- mdp 3.3
- mingw 4.7 *W*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nose 1.3.0
- numba 0.9.0
- numpy 1.7.1
- pandas 0.11.0
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pyflakes 0.7.2
- pygments 1.6
- pyside 1.1.2 *W*
- python 3.3.2
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- requests 1.2.3
- scikit-image 0.8.2
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- sqlalchemy 0.8.1
- sympy 0.7.2
- tornado 3.1
- xlrd 0.9.2
- zlib 1.2.7

Python 2.6

Available through conda

- argparse 1.2.1
- astropy 0.2.3
- atom 0.2.3
- biopython 1.61
- bitarray 0.8.1
- boto 2.9.6
- cairo 1.12.2 *L*
- casuarius 1.1
- curl 7.30.0 *LM*
- cython 0.19.1
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.45
- docutils 0.10
- dynd-python 0.4.0
- erlang R15B01 *L*
- flask 0.10.1
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.1
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.2
- itsdangerous 0.21
- jinja2 2.6
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmmath 0.1.0
- llvmpy 0.11.3
- lxml 3.2.1
- matplotlib 1.2.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nltk 2.0.4
- nose 1.3.0
- numba 0.9.0
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.2 *L*
- ordereddict 1.1
- pandas 0.11.0
- pep8 1.4.5
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- py 1.4.14
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.7.2
- pygments 1.6
- pyparsing 1.5.6
- pysam 0.6 *LM*
- pytables 2.4.0 *LM*
- pytest 2.3.5
- python 2.6.8
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis-py 2.7.2 *LM*
- requests 1.2.3
- scikit-image 0.8.2
- scikit-learn 0.13.1
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- sqlalchemy 0.8.1
- statsmodels 0.4.3
- sympy 0.7.2 *LM*
- theano 0.5.0 *L*
- tornado 3.1
- werkzeug 0.9.1
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.6.0 (Jun 21, 2013)

Highlights:

- the "Launcher", which allows users to start up applications
- conda has now the ability to build conda packages, which can be uploaded to binstar.org
- conda now uses a SAT solver to solve the install dependency problem

Enhancements:

- added a .pkg installer for macOS, such that installing Anaconda does not require command line access
- create copy of .bashrc (.bash_profile on macOS) before appending the PATH setting upon install
- Windows Menu items should are now installed system wide

Fixes:

- removed Lib/test/testbz2_bigmem.bz2 from Windows, this (harmless) file was triggering Trojan-ArcBomb.BZip.Agent warning, see: http://bugs.python.org/issue17843
- json.decoder in Python 2.7 standard library not using .decode('hex'), this was (mysteriously) causing install problems on macOS
- fixed PIL._imagetk on Linux

Updated:

- python from 2.7.4 to 2.7.5, and 3.3.1 to 3.3.2
- conda from 1.5.2 to 1.7.1
- numba from 0.8.1 to 0.9.0
- requests from 1.2.0 to 1.2.3

Added:

- launcher 0.1.1
- binstar 0.1.1
- itsdangerous 0.21
- keyring 1.4
- llvmmath 0.1.0
- pep8 1.4.5
- pywin32 218.4 on Windows

Anaconda 1.5.1 (May 09, 2013) (macOS only)

- fixed pip command
- replace spaces by underscore in user install location
- shared libraries now link to /usr/lib/libgcc_s.1.dylib (instead of /usr/local/lib/libgcc_s.1.dylib)

Anaconda 1.5.0 (May 08, 2013)

Highlights:

- updates to all important packages: python, numpy, scipy, ipython, matplotlib, pandas, cython
- added netCDF4 (with OpenDAP support) on Linux and macOS

Fixed:

- Cython on macOS on Python 2.6, due to a problem with Pyhton's config/Makefile
- py.test command (all platforms)
- python-config command not using correct interpreter on macOS
- added missing MSVC 2008 and 2010 runtime to Windows installers
- removed hard-coded build location from identification name of dynamic shared libraries on macOS, to allow easier building against libraries in Anaconda

Enhancements:

- **The Windows installers has a new dialog box with the following options:**
  - "Add Anaconda to the System Path"
  - "Register Anaconda as default Python version of the system"
- The Unix installers have an option to add Anaconda to the path in the ~/.bashrc (on Linux) or ~/.bash_profile (on macOS). On macOS the default is 'yes', on Linux the default is 'no'.
- added armv6l supports (only Python 2.7 and selected packages)
- link pycurl and libnetcdf dynamically against curl library on Unix
- add configure option –with-pgm for zeromq on Unix

Updates:

- python from 2.7.3 to 2.7.4, and 3.3.0 to 3.3.1
- numpy from 1.7.0 to 1.7.1
- scipy from 0.11.0 to 0.12.0
- ipython from 0.13.1 to 0.13.2
- matplotlib from 1.2.0 to 1.2.1
- conda from 1.4.4 to 1.5.2
- numba from 0.7.0 to 0.8.1
- pandas from 0.10.1 to 0.11.0
- requests from 0.13.9 to 1.2.0
- scikit-learn from 0.13 to 0.13.1

- spyder from 2.1.13 to 2.2.0
- sympy from 0.7.1 to 0.7.2

Removed (from installer only, still available with conda):

- bitey
- gdata (conflicts with atom (which is required by enaml))
- googlecl (requires gdata)

Packages

Python 2.7

Included in installer

- astropy 0.2.1
- atom 0.2.3
- biopython 1.61
- bitarray 0.8.1
- boto 2.9.2
- cairo 1.12.2 *L*
- casuarius 1.1
- conda 1.5.2
- cubes 0.10.2
- curl 7.30.0 *LM*
- cython 0.19
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.36
- docutils 0.10
- dynd-python 0.3.0
- enaml 0.7.6
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.2
- jinja2 2.6
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.2
- lxml 3.2.0
- matplotlib 1.2.1
- mdp 3.3
- menuinst 1.0.0 *W*
- meta 0.4.2.dev
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nltk 2.0.4
- nose 1.3.0
- numba 0.8.1
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.2 *L*
- pandas 0.11.0
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.7.2
- pygments 1.6
- pyparsing 1.5.6
- pysal 1.5.0
- pysam 0.6 *LM*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.4
- python 2.7.4
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis-py 2.7.2 *LM*
- requests 1.2.0
- scikit-image 0.8.2
- scikit-learn 0.13.1
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- spyder 2.2.0
- sqlalchemy 0.8.1
- statsmodels 0.4.3
- sympy 0.7.2
- theano 0.5.0 *L*
- tornado 3.0.1
- werkzeug 0.8.3
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- astropy 0.2.1
- bitarray 0.8.1
- curl 7.30.0 *LM*
- cython 0.19
- dateutil 2.1
- distribute 0.6.36
- docutils 0.10
- dynd-python 0.3.0
- freetype 2.4.10
- greenlet 0.4.0
- hdf5 1.8.9
- ipython 0.13.2
- jinja2 2.6
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.2
- lxml 3.2.0
- matplotlib 1.2.1
- mdp 3.3
- mingw 4.7 *W*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nose 1.3.0
- numba 0.8.1
- numpy 1.7.1
- pandas 0.11.0
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pyflakes 0.7.2
- pygments 1.6
- pyside 1.1.2 *W*
- python 3.3.1
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- requests 1.2.0
- scikit-image 0.8.2
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- sqlalchemy 0.8.1
- sympy 0.7.2
- tornado 3.0.1
- xlrd 0.9.2
- zlib 1.2.7

Python 2.6

Available through conda

- argparse 1.2.1
- astropy 0.2.1
- atom 0.2.3
- biopython 1.61
- bitarray 0.8.1
- boto 2.9.2
- cairo 1.12.2 *L*
- casuarius 1.1
- curl 7.30.0 *LM*
- cython 0.19
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.36
- docutils 0.10
- dynd-python 0.3.0
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.2
- jinja2 2.6
- libevent 2.0.20
- libnetcdf 4.2.1.1 *LM*
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.2
- lxml 3.2.0
- matplotlib 1.2.1 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- netcdf4 1.0.4 *LM*
- networkx 1.7
- nltk 2.0.4
- nose 1.3.0
- numba 0.8.1
- numexpr 2.0.1
- numpy 1.7.1
- opencv 2.4.2 *L*
- ordereddict 1.1
- pandas 0.11.0
- pip 1.3.1
- ply 3.4
- psutil 0.7.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pycosat 0.6.0
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.7.2
- pygments 1.6
- pyparsing 1.5.6
- pysam 0.6 *LM*
- pytables 2.4.0 *LM*
- pytest 2.3.4
- python 2.6.8
- pytz 2013b
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis-py 2.7.2 *LM*
- requests 1.2.0
- scikit-image 0.8.2
- scikit-learn 0.13.1
- scipy 0.12.0
- six 1.3.0
- sphinx 1.1.3
- sqlalchemy 0.8.1
- statsmodels 0.4.3
- sympy 0.7.2 *LM*
- theano 0.5.0 *L*
- tornado 3.0.1
- werkzeug 0.8.3
- xlrd 0.9.2
- xlwt 0.7.5
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.4.0 (Mar 12, 2013)

Many more packages are now supported on Python 3.3. In addition, we have added Python 3 support on Windows, such that now Python 2.6, 2.7 and 3.3 is supported across all platforms. In addition, we have redesigned the Windows installer, which was suffering from a number of problems, in particular the lack of uninstall functionality and the GUI not working on some systems.

updated:

- conda from 1.3.5 to 1.4.2
- numba from 0.6.0 to 0.7.0
- numpy from 1.7rc1 to 1.7.0
- scikit-image from 0.7.1 to 0.8.2

fixed:

- pytables on Windows

other notes:

- Linux: a ATLAS package is now available (conda install atlas). In addition the site.cfg in the numpy.distutils has been updated, such that other packages (e.g. scipy) which use the atlas build configuration can be build against the (non-MKL linked) numpy in Anaconda.

Packages

Python 2.7

Included in installer

- astropy 0.2
- biopython 1.60
- bitarray 0.8.0
- bitey 0.0
- boto 2.8.0
- cairo 1.12.2 *L*
- conda 1.4.4
- cubes 0.10.2
- cython 0.18
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.34
- docutils 0.10
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gdata 2.0.17
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- googlecl 0.9.12
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.1
- jinja2 2.6
- libevent 2.0.20
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.1
- lxml 3.0.2
- matplotlib 1.2.0
- mdp 3.3
- menuinst 1.0.0 *W*
- meta 0.4.2.dev
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- networkx 1.7
- nltk 2.0.4
- nose 1.2.1
- numba 0.7.0
- numexpr 2.0.1
- numpy 1.7.0
- opencv 2.4.2 *L*
- pandas 0.10.1
- pip 1.2.1
- ply 3.4
- psutil 0.6.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.6.1
- pygments 1.6
- pyparsing 1.5.6
- pysal 1.5.0
- pysam 0.6 *LM*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.4
- python 2.7.3
- pytz 2012j
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis 2.6.9 *LM*
- redis-py 2.7.2 *LM*
- requests 0.13.9
- scikit-image 0.8.2
- scikit-learn 0.13
- scipy 0.11.0
- six 1.2.0
- sphinx 1.1.3
- spyder 2.1.13
- sqlalchemy 0.7.8
- statsmodels 0.4.3
- sympy 0.7.1
- theano 0.5.0 *L*
- tornado 2.4.1
- werkzeug 0.8.3
- xlrd 0.9.0
- xlwt 0.7.4
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Python 3.3

Available through conda

- astropy 0.2
- bitarray 0.8.0
- cython 0.18
- dateutil 2.1
- distribute 0.6.34
- docutils 0.10
- freetype 2.4.10
- greenlet 0.4.0
- ipython 0.13.1
- jinja2 2.6
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.1
- lxml 3.0.2
- matplotlib 1.2.0
- mdp 3.3
- mingw 4.7 *W*
- networkx 1.7
- nose 1.2.1
- numpy 1.7.0
- pandas 0.10.1 *LM*
- pip 1.2.1
- ply 3.4
- psutil 0.6.1
- pycparser 2.9.1
- pycrypto 2.6
- pyflakes 0.6.1
- pygments 1.6
- python 3.3.0
- pytz 2012j
- pyyaml 3.10
- pyzmq 2.2.0.1
- requests 0.13.9
- scikit-image 0.8.2 *LM*
- scipy 0.11.0 *LM*
- six 1.2.0
- sphinx 1.1.3
- sqlalchemy 0.7.8
- tornado 2.4.1
- xlrd 0.9.0
- zlib 1.2.7

Python 2.6

Available through conda

- argparse 1.2.1
- astropy 0.2
- biopython 1.60
- bitarray 0.8.0
- boto 2.8.0
- cairo 1.12.2 *L*
- cython 0.18
- dateutil 2.1
- disco 0.4.4 *L*
- distribute 0.6.34
- docutils 0.10
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gdata 2.0.17
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- googlecl 0.9.12
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- ipython 0.13.1
- jinja2 2.6
- libevent 2.0.20
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.11.1
- lxml 3.0.2
- matplotlib 1.2.0 *LM*
- mdp 3.3
- mingw 4.7 *W*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- networkx 1.7
- nltk 2.0.4
- nose 1.2.1
- numba 0.7.0
- numexpr 2.0.1
- numpy 1.7.0
- opencv 2.4.2 *L*
- pandas 0.10.1
- pip 1.2.1
- ply 3.4
- psutil 0.6.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pycparser 2.9.1
- pycrypto 2.6
- pycurl 7.19.0 *LM*
- pyflakes 0.6.1
- pygments 1.6
- pyparsing 1.5.6
- pysam 0.6 *LM*
- pytables 2.4.0 *LM*
- pytest 2.3.4
- python 2.6.8
- pytz 2012j
- pyyaml 3.10
- pyzmq 2.2.0.1
- redis 2.6.9 *LM*
- redis-py 2.7.2 *LM*
- requests 0.13.9
- scikit-image 0.8.2
- scikit-learn 0.13
- scipy 0.11.0
- six 1.2.0
- sphinx 1.1.3
- sqlalchemy 0.7.8
- statsmodels 0.4.3
- sympy 0.7.1 *LM*
- theano 0.5.0 *L*
- tornado 2.4.1
- werkzeug 0.8.3
- xlrd 0.9.0
- xlwt 0.7.4
- zlib 1.2.7

Only available on: *L* (Linux) - *M* (macOS) - *W* (Windows)

Anaconda 1.3.1 (Feb 06, 2013)

added:

- Python 2.6 support for iopro, numba and numbapro
- Python 2.6 support on Windows (Python 2.6 is now supported on all platforms)
- added pythonw (the command to run Python GUI applications) on macOS
- added chaco on Windows

updates:

- conda from 1.3.2 to 1.3.5
- numba from 0.5.0 to 0.6.0

Packages

- biopython 1.60
- bitarray 0.8.0
- bitey 0.0
- boto 2.7.0
- cairo 1.12.2 *L*
- conda 1.3.5
- cubes 0.10.1
- cython 0.17.4
- dateutil 1.5
- disco 0.4.4 *L*
- distribute 0.6.34
- docutils 0.10
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gdata 2.0.17
- gevent 0.13.8
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- googlecl 0.9.12
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.1
- hdf5 1.8.9
- imaging 1.1.7
- iopro 1.3.2 *P*
- ipython 0.13.1
- jinja2 2.6
- libevent 2.0.20
- libnvvm 1.0 *P*
- libpng 1.5.13
- llvm 3.2
- llvmpy 0.10.2
- matplotlib 1.2.0
- mdp 3.3
- meta 0.4.2.dev
- mingw 4.7 *W*
- mkl 10.3 *LP*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- networkx 1.7
- nltk 2.0.4
- nose 1.2.1
- numba 0.6.0
- numbapro 0.8.1 *P*
- numexpr 2.0.1
- numpy 1.6.2 *W*
- numpy 1.7.0rc1 *U*
- opencv 2.4.2 *L*
- pandas 0.10.1
- pip 1.2.1
- ply 3.4
- psutil 0.6.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pyaudio 0.2.7 *M*
- pycrypto 2.6
- pycurl 7.19.0
- pyflakes 0.5.0
- pygments 1.5
- pyparsing 1.5.6
- pysal 1.4.0
- pysam 0.6 *U*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.4
- python 2.7.3
- pytz 2012d
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis 2.6.9 *U*
- redis-py 2.7.2 *U*
- requests 0.13.9
- scikit-learn 0.13
- scikits-image 0.7.1
- scipy 0.11.0
- sphinx 1.1.3
- spyder 2.1.13
- sqlalchemy 0.7.8
- statsmodels 0.4.3
- sympy 0.7.1
- theano 0.5.0 *L*
- tornado 2.4.1
- werkzeug 0.8.3
- wiserf 1.1 *UP*
- zeromq 2.2.0
- zlib 1.2.7

U: Unix - *L*: Linux - *M*: macOS - *W*: Windows - *P*: not in CE

Anaconda 1.3.0 (Jan 23, 2013)

fixes:

- fixed missing Grammar.txt in Sphinx
- recompiled llvm and llvmpy using gcc 4.4.6 on Linux, this fixes a problem with the mandel.py example in numba
- made Windows installer dialog box resizeable
- fixed problem that importing numbapro or iopro removed sys from the namespace

updates:

- numba from 0.3.2 to 0.5.0
- conda from 1.2.1 to 1.3.0
- pandas from 0.9.0 to 0.10.1
- spyder form 2.1.11 to 2.1.13
- numpy from 1.7.0b2 to 1.7.0rc1
- scikit-learn from 0.11 to 0.12.1

- scikits-image from 0.6.1 to 0.7.1
- pytest from 2.3.3 to 2.3.4

Anaconda 1.2.1 (Nov 21, 2012)

- pucurl on macOS
- anaconda-launcher envs by updating to conda 1.2.1
- add missing pyodbc numpy_tests in iopro/tests/pyodbc
- updated wiseRF to version 1.1
- add creation of .continuum directory (if not created yet) on Windows
- minor fixes in numba, numbapro, and iopro
- fixed version of "py" package
- add missing Windows manifest to Windows executable installer
- fixed Windows Menu install and making Anaconda the default Python
- on 2012-12-06 we released a 32-bit Linux version

Packages

- bitarray 0.8.0
- bitey 0.0
- boto 2.6.0
- cairo 1.12.2 *L*
- chaco 4.2.1.dev *M*
- conda 1.2.1
- cython 0.17.1
- dateutil 1.5
- disco 0.4.2 *L*
- distribute 0.6.30
- docutils 0.9.1
- erlang R15B01 *L*
- flask 0.9
- freetype 2.4.10
- gevent 0.13.7
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet 0.4.0
- grin 1.2.1
- h5py 2.1.0
- hdf5 1.8.9
- imaging 1.1.7
- iopro 1.2.2 *P*
- ipython 0.13.1
- jinja2 2.6
- jpeg 8d
- libevent 2.0.20
- libpng 1.5.13
- llvm 3.1
- llvmpy 0.9
- matplotlib 1.2.0
- mdp 3.3
- meta 0.4.2.dev
- mingw 4.7 *W*
- mkl 10.3 *LP*
- mpi4py 1.3 *L*
- mpich2 1.4.1p1 *L*
- networkx 1.7
- nltk 2.0.3
- nose 1.1.2
- numba 0.3.2
- numbapro 0.7.3 *P*
- numexpr 2.0.1
- numpy 1.6.2 *W*
- numpy 1.7.0b2 *U*
- opencv 2.4.2 *L*
- pandas 0.9.0
- pip 1.2.1
- psutil 0.6.1
- py 1.4.12
- py2cairo 1.10.0 *L*
- pyaudio 0.2.6 *M*
- pycurl 7.19.0
- pyflakes 0.5.0
- pygments 1.5
- pyreadline 1.7.1 *W*
- pysal 1.4.0
- pysam 0.6 *U*
- pyside 1.1.2
- pytables 2.4.0
- pytest 2.3.3
- python 2.7.3
- pytz 2012d
- pyyaml 3.10
- pyzmq 2.2.0.1
- qt 4.7.4
- redis 2.4.15 *L*
- redis-py 2.4.13 *L*
- requests 0.13.9
- scikit-learn 0.11
- scikits-image 0.6.1
- scipy 0.11.0
- sphinx 1.1.3
- spyder 2.1.11
- sqlalchemy 0.7.8
- statsmodels 0.4.3
- sympy 0.7.1
- theano 0.5.0 *L*
- tornado 2.3
- werkzeug 0.8.3
- wiserf 1.1 *UP*
- yaml 0.1.4
- zeromq 2.2.0
- zlib 1.2.7

U: Unix - *L*: Linux - *M*: macOS - *W*: Windows - *P*: not in CE

Anaconda 1.2.0 (Nov 13, 2012)

- performance and feature enhancements to Numba Pro
- performance and feature enhancements to IOPro
- improved conda command (package management)
- added Qt to the Linux Version (Qt is now on all platforms)
- added MDP, NLTK and py, pytest
- update matplotlib from 1.1.1 to 1.2.0
- update h5py from 2.0.1 to 2.1.0
- update IOPro to 1.2.1
- update libpng to 1.5.13

Anaconda 1.1.0 (Oct 05, 2012)

- add GUI to Windows installer
- IDE Spyder (Qt) for Mac Version
- add conda 1.0
- update llvmpy to 0.8.3
- add MinGW on Windows

Packages

- anaconda launcher
- bitarray 0.8.0
- bitey
- cython 0.16
- dateutil 1.5
- disco 0.4.2 (Linux only)
- erlang (Linux only)
- flask 0.9
- gevent 0.13.7
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet0.4.0
- h5py 2.0.1
- hdf5 1.8.9
- PIL 1.1.7
- iopro 1.0 *
- ipython 0.13
- jinja2 2.6
- llvm 3.1
- llvmpy 0.8.2.dev
- matplotlib 1.1.1
- mpi4py 1.3
- mpich2 1.4.1p1
- networkx 1.7
- nose 1.1.2
- numba 0.1.dev
- numbapro 1.0 *
- numexpr 2.0.1
- numpy 1.7.dev
- opencv 2.4.2
- openssl 1.0.1c
- pandas 0.8.1
- pip 1.1
- pixman 0.26.2
- py2cairo 1.10.0
- pycurl 7.19.0
- pygments 1.5
- pysal 1.4.0
- pysam 0.6
- pytables 2.4.0
- python 2.7.3
- pytz 2012c
- pyyaml 3.10
- pyzmq 2.2.0
- redis 2.4.15 (Linux only)
- redis py-2.4.13
- requests 0.13.5
- scikit-learn 0.11
- scikits-image 0.6.1
- scipy 0.11.0rc2
- spyder
- sqlalchemy 0.7.8
- sqlite 3.7.13
- statsmodels 0.4.3
- sympy 0.7.1
- theano 0.5.0
- tornado 2.3
- werkzeug 0.8.3
- wiseRF *

*** Included in Anaconda Pro Only**

Note: Packages may vary on different platforms.

Anaconda 1.0.0 (Sep 06, 2012)

- add Windows support
- installer can now install into different locations
- enable building free and permium version
- enable termcap in erlang
- add MKL support to permium version
- add networkx, pysal, pycurl, gevent_zeromq, requests, pip, distribute
- add iopro to permium version
- update scipy from 0.11.0b1 to 0.11.0rc2
- update scikits-image form 0.6 to 0.6.1
- update pytables from 2.4.0b1 to 2.4.0
- update pandas from 0.8.0 to 0.8.1
- add patch to disco to always use the anaconda erl
- remove useless files (Python) from being installed

Packages

- anaconda launcher
- bitarray 0.8.0
- bitey
- cython 0.16
- dateutil 1.5
- disco 0.4.2 (Linux only)
- erlang (Linux only)
- flask 0.9
- gevent 0.13.7
- gevent-websocket 0.3.6
- gevent_zeromq 0.2.5
- greenlet0.4.0
- h5py 2.0.1
- hdf5 1.8.9
- PIL 1.1.7
- iopro 1.0 *
- ipython 0.13
- jinja2 2.6
- llvm 3.1
- llvmpy 0.8.2.dev
- matplotlib 1.1.1
- mpi4py 1.3
- mpich2 1.4.1p1
- networkx 1.7
- nose 1.1.2
- numba 0.1.dev
- numbapro 1.0 *
- numexpr 2.0.1
- numpy 1.7.dev
- opencv 2.4.2
- openssl 1.0.1c
- pandas 0.8.1
- pip 1.1
- pixman 0.26.2
- py2cairo 1.10.0
- pycurl 7.19.0
- pygments 1.5
- pysal 1.4.0
- pysam 0.6
- pytables 2.4.0
- python 2.7.3
- pytz 2012c
- pyyaml 3.10
- pyzmq 2.2.0
- redis 2.4.15 (Linux only)
- redis py-2.4.13
- requests 0.13.5
- scikit-learn 0.11
- scikits-image 0.6.1
- scipy 0.11.0rc2
- sqlalchemy 0.7.8
- sqlite 3.7.13
- statsmodels 0.4.3
- sympy 0.7.1
- theano 0.5.0
- tornado 2.3
- werkzeug 0.8.3
- wiseRF *

*** Included in Anaconda Pro Only**

Anaconda 0.9.0 (Aug 21, 2012)

- add macOS (x86_64 10.5 or higher) support
- add bitey and other packages
- update several other packages

Anaconda 0.8.3 (Jul 18, 2012)

- update changes to etc/init.d/disco script
- add patch, fixes disco and ddfs listdir misfeature
- add –packages option to anaconda command
- add missing h5py
- improve ease of testing

Anaconda 0.8.2 (Jul 18, 2012)

- fixed theano.sparse
- removed (broken) scikits namespace
- add disco config and setup files
- add anaconda command, for version information

Anaconda 0.8.1 (Jul 17, 2012)

- fixed libm.so ctypes error in scipy tests
- added import tests to all C extension modules
- fixed lzo support in pytables

Anaconda 0.8.0 (Jul 17, 2012)

- initial release

Uninstalling Anaconda Distribution

Need to uninstall Anaconda Navigator?

See *Uninstalling Navigator*.

Need to uninstall Miniconda?

The uninstall instructions on this page are almost identical to those for Miniconda, but for specific uninstall instructions for Miniconda, see *Uninstalling Miniconda*.

Note: The uninstall procedure might leave behind certain artifacts, such as desktop shortcuts or supplementary files, that must be deleted manually after completion. This is a known issue that is being addressed.

To uninstall your Anaconda installation:

Windows

1. (Optional) If you have created any environments outside your `anaconda3` directory, you can manually delete them to increase available disc space on your computer. This step must be performed before uninstalling Anaconda Distribution.

   #### Uninstall environments outside the `anaconda3` directory

   1. Open Anaconda Prompt.
   2. View a list of all your environments by running the following command:

      ```
      conda info --envs
      ```

      If you have any environments in a directory other than `anaconda3`, you will need to uninstall the directory that contains the environments. Uninstalling the directory with the following command will both delete the environment files and deregister the environments.
   3. Open your preferred shell.
   4. Uninstall the directory by running the following command:

      ```
      # Replace <YOUR_USERNAME> with your Windows username
      # Replace <PATH_TO_ENV_DIRECTORY> with the path to the directory␣
      ↪that contains the environments
      C:\Users\<YOUR_USERNAME>\anaconda3\_conda constructor uninstall --
      ↪prefix <PATH_TO_ENV_DIRECTORY>
      ```

2. Search for "Control Panel" in the Windows search box and select the Control Panel app.
3. Click **Uninstall a program** under **Programs**.
4. Select Anaconda from the list of programs.
5. Click **Uninstall**.
6. Follow the on-screen instructions to complete the uninstallation process.

Silent CLI uninstall

On Windows operating systems, you can silently uninstall Anaconda Distribution using either Command Prompt or PowerShell.

Command Prompt

Open a new Command Prompt window and run the following command:

```
start /wait .\anaconda3\Uninstall-Anaconda3.exe /S
```

PowerShell

Open a new PowerShell window and run the following command:

```
Start-Process -FilePath ".\anaconda3\Uninstall-Anaconda3.exe" -ArgumentList "/S" -Wait
```

Note: An uninstall of Anaconda Distribution may take several minutes to complete.

---

macOS or Linux

1. Open your terminal application.
2. (Optional) If you have created any environments outside your `anaconda3` directory, you can manually delete them to increase available disc space on your computer. This step must be performed before uninstalling Anaconda Distribution.

Uninstall environments outside the `anaconda3` directory

1. View a list of all your environments by running the following command:

   ```
   conda info --envs
   ```

   If you have any environments in a directory other than `anaconda3`, you will need to uninstall the directory that contains the environments. Uninstalling the directory with the following command will both delete the environment files and deregister the environments.

2. Uninstall the directory by running the following command:

   ```
   # Replace <PATH_TO_ENV_DIRECTORY> with the path to the directory␣
   ↪that contains the environments
   ~/anaconda3/_conda constructor uninstall --prefix <PATH_TO_ENV_
   ↪DIRECTORY>
   ```

3. (Optional) Remove any conda initialization scripts from all your terminal shell profiles by running the following command:

   ```
   conda activate
   conda init --reverse --all
   ```

What are conda initialization scripts?

Initialization scripts execute commands that configure your shell to automatically recognize conda commands.

For a technical explanation of initialization, see Conda initialization in the official conda documentation.

To see a list of shells where conda can be initialized, see conda init in the official conda documentation.

4. Remove your entire `anaconda3` directory with `rm -rf`. Depending on your installation, this directory will be in your root folder or in your opt folder.

> **Warning:** When paired with the `-r` (recursive) flag, the `f` (force) flag deletes all specified directories and the files within them without prompting you for confirmation. Double-check and verify that you have correctly specified the directories you intend to delete before running `rm -rf`, as this action can't be undone.

```
# The following are a few examples of how you might need to delete your␣
↪anaconda3 folder
rm -rf anaconda3
rm -rf ~/anaconda3
sudo rm -rf /opt/anaconda3
```

5. (Optional) Remove the hidden `.condarc` file and `.conda`, `.continuum`, and `.anaconda` directories from your home directory by running the following command:

> **Caution:** Consider keeping a backup of the `.condarc` file, especially if you have custom configurations for conda and are planning on reinstalling.

```
rm -rf ~/.condarc ~/.conda ~/.continuum ~/.anaconda
```

6. Close and reopen your terminal to refresh it. You should no longer see `(base)` in your terminal prompt.

2.18.3 Miniconda

Miniconda is a free, miniature installation of Anaconda Distribution that includes only conda, Python, the packages they both depend on, and a small number of other useful packages.

If you need more packages, use the `conda install` command to install from thousands of packages available by default in Anaconda's public repo, or from other channels, like conda-forge or bioconda.

Is Miniconda free for me?

> For details on Miniconda and Anaconda's Terms of Service, see our Terms of Service FAQ and our official Terms of Service.

Should I install Miniconda or Anaconda Distribution?

The *Getting Started with Anaconda* page lists some reasons why you might want one installation over the other.

System requirements

- Operating system: Windows 10 or later, 64-bit macOS 10.15+ (for Intel) or 64-bit macOS 11.1+ (for Apple Silicon), or Linux, including Ubuntu, RedHat, CentOS 7+, and others.
- If your operating system is older than what is currently supported, you can find older versions of the Miniconda installers in our archive that might work for you.
- System architecture: Windows - 64-bit x86; macOS - 64-bit x86 or Apple Silicon (ARM64); Linux - 64-bit x86, 64-bit aarch64 (AWS Graviton2), or s390x (Linux on IBM Z & LinuxONE).
- The `linux-aarch64` Miniconda installer requires `glibc >=2.26` and thus will **not** work with CentOS 7, Ubuntu 16.04, or Debian 9 ("stretch").
- The `linux-aarch64` package builds might not be compatible with certain Raspberry Pi setups, as Anaconda uses compiler options that target the server-class Neoverse N1/N2 microarchitecture.
- Minimum 400 MB disk space to download and install.

Note: It is best practice to install Miniconda for the local user, which does not require administrator permissions and is the most robust type of installation. However, if you have administrator permissions, you can install Miniconda system-wide.

Installing Miniconda

This page contains basic Miniconda installation instructions for Windows, macOS, and Linux, as well as a command-line quickstart installation guide.

Note: On Windows, macOS, and Linux, it is best to install Miniconda for the local user, which does not require administrator permissions and is the most robust type of installation. However, if you need to, you can install Miniconda system wide, which does require administrator permissions.

Basic install instructions

Windows installation

1. Download the installer from the Anaconda website or by using your preferred command line interface:

Anaconda website

Command Prompt

Open a Command Prompt window and run the following command:

```
curl https://repo.anaconda.com/miniconda/Miniconda3-latest-Windows-
↪x86_64.exe --output .\Downloads\Miniconda3-latest-Windows-x86_64.
↪exe
```

To download a different version

View a full list of Miniconda installers in the official Miniconda archive.

To download a different version of Miniconda, copy the **Filename** of an installer from the Miniconda archive, then download it using a `curl` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the Miniconda archive
curl https://repo.anaconda.com/miniconda/<FILENAME> --output
↪<FILENAME>
```

> **Caution:** Ensure that you are downloading an installer that is compatible with your operating system!

PowerShell

Open a PowerShell window and run the following command:

```
wget "https://repo.anaconda.com/miniconda/Miniconda3-latest-Windows-
↪x86_64.exe" -outfile ".\Downloads\Miniconda3-latest-Windows-x86_
↪64.exe"
```

To download a different version

View a full list of Miniconda installers in the official Miniconda archive.

To download a different version of Miniconda, copy the **Filename** of an installer from the Miniconda archive, then download it using a `wget` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the Miniconda archive
wget "https://repo.anaconda.com/miniconda/<FILENAME>"" -outfile ".\
↪Downloads\<FILENAME>"
```

Caution: Ensure that you are downloading an installer that is compatible with your operating system!

2. (Recommended) Verify the integrity of your installer to ensure that it was not corrupted or tampered with during download.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open PowerShell and run the following command:

   ```
   # Replace <INSTALLER_FILE> with the name of the downloaded␣
   ↪installer file
   Get-FileHash .\Downloads\<INSTALLER_FILE> -Algorithm SHA256
   ```

   For example:

   ```
   Get-FileHash .\Downloads\Miniconda3-latest-Windows-x86_64.
   ↪exe -Algorithm SHA256
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/miniconda to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Go to your Downloads folder (or Home folder if downloaded via CLI) and double-click the installer to launch.

Caution: To prevent permission errors, do not launch the installer from the *Favorites folder*.

Note: If you encounter issues during installation, temporarily disable your anti-virus software during install, then re-enable it after the installation concludes. If you installed for **All**

Users, *uninstall* Miniconda and re-install it for **Just Me** only.

4. Click **Next** and then agree to Anaconda's Terms of Service (TOS) .
5. Select an installation option:
   - Just Me (Recommended) - Install Miniconda for the current user account.
   - All Users - Install Miniconda for all user accounts on the computer (requires Windows Administrator privileges).
6. Click **Next**.
7. Select a destination folder to install Miniconda, then click **Next**.

Caution:

- The installation directory path cannot contain spaces or Unicode characters. For more information, see the *FAQ*.
- Do not install as Administrator unless admin privileges are required.

8. Customize your installation options:
   - Create shortcuts - Selected by default. Creates Start Menu shortcuts for the Anaconda Prompt packages. Deselecting this option skips creating these shortcuts.
   - Add Miniconda3 to my PATH environment variable - Adds the path that contains the conda binaries to your PATH environment variable.

     Anaconda **does not** recommend selecting this option. The conda binaries path contains other package binaries, which are permanently added to your PATH environment variable, even if no conda environment is currently active. This makes it possible for other software to use these package files, which might lead to errors.

     Note: Unless you plan on installing and running multiple versions of Miniconda or Python, open Anaconda Prompt from the Start Menu to begin your environment management work.

   - Register Miniconda3 as my default Python 3.12 - Selected by default. Registers the Python package in this install as the default Python for programs like VSCode, PyCharm, etc.
   - Clear the package cache upon completion - Runs `conda clean --all --force-pkgs-dirs` after the install finishes. For more information on these commands, see the conda command documentation.
9. Click **Install**. The installation might take a few minutes to complete. Click **Show details** to view the packages being installed.
10. Click **Next** twice, then click **Finish** to close the installer.

For information on installing in silent mode, see the *Quick command line install* commands for examples or the Installing in silent mode section of Installing on Windows in the conda project documentation.

macOS/Linux installation

macOS graphical installer

Caution: The graphical installer for macOS installs Miniconda into `/opt/miniconda3` in your file system. If you want to install Miniconda into your Home directory or if you have multiple users on a system and want to manage your installation more carefully, Anaconda recommends the *shell (or command line) installer*.

1. Download the .pkg installer. Miniconda is a smaller version of the Distribution installer and is now available through the Anaconda website.
2. (Optional) Anaconda recommends verifying the integrity of the installer after downloading it.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

```
# Replace <FILE_NAME> with the path to your installer
shasum -a 256 <FILE_NAME>
```

   For example:

```
shasum -a 256 ~/Downloads/Miniconda3-latest-MacOSX-arm64.pkg
```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/miniconda to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Double-click the `.pkg` file.
4. View the Read Me instructions and click **Continue**.
5. Read through Anaconda's Terms of Service (TOS) and click **Continue**, then click **Agree** to agree to the terms.
6. Choose an install location:
   - Install for all users of this computer (Recommended) - Installs Miniconda into /opt/miniconda3 for all users of the computer.
   - Install on a specific disk - Enables you to choose a different location to install Miniconda.
7. Click **Install**. When the installation finishes, open your terminal application.

Note: You should see `(base)` in the command line prompt. This tells you that you're in your base conda environment. To learn more about environments, see *Environments*.

8. Test your installation by running `conda list`. If conda has been installed correctly, a list of installed packages appears.

macOS terminal installer

1. Download the `.sh` installer using the following command:

Apple Silicon

```
curl -O https://repo.anaconda.com/miniconda/Miniconda3-latest-
↪MacOSX-arm64.sh
```

Intel

```
curl -O https://repo.anaconda.com/miniconda/Miniconda3-latest-
↪MacOSX-x86_64.sh
```

To download a different version

View a full list of Miniconda installers in the official Miniconda archive.

To download a different version of Miniconda, copy the **Filename** of an installer from the archive, then download it using a `curl` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
curl -O https://repo.anaconda.com/miniconda/<FILENAME>
```

Caution: Ensure that you are downloading an installer that is compatible with your operating system!

2. (Optional) Anaconda recommends verifying the integrity of the installer after downloading it.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

```
# Replace <FILE_NAME> with the path to your installer
shasum -a 256 <FILE_NAME>
```

For example:

```
shasum -a 256 ~/Downloads/Miniconda3-latest-MacOSX-arm64.sh
```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/miniconda to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Install by running the following (depending on your macOS architecture):

Apple Silicon

```
bash ~/Miniconda3-latest-MacOSX-arm64.sh
```

Intel

```
bash ~/Miniconda3-latest-MacOSX-x86_64.sh
```

4. Press Return to review Anaconda's Terms of Service (TOS). Then press and hold Return to scroll.
5. Enter `yes` to agree to the TOS.
6. Press Return to accept the default install location (`PREFIX=/Users/<USER>/miniconda3`), or enter another file path to specify an alternate installation directory. The installation might take a few minutes to complete.
7. Choose an initialization options:
   - Yes - `conda` modifies your shell configuration to initialize conda whenever you open a new shell and to recognize conda commands automatically.
   - No - `conda` will not modify your shell scripts. After installation, if you want to initialize, you must do so manually. For more information, see *Manual shell initialization*.
8. The installer finishes and displays, "Thank you for installing Miniconda3!"
9. Close and re-open your terminal window for the installation to fully take effect, or use the following command to refresh the terminal:

```
source ~/.zshrc
```

Note: You should see `(base)` in the command line prompt. This tells you that you're in your base conda environment. To learn more about environments, see *Environments*.

---

10. Test your installation by running `conda list`. If conda has been installed correctly, a list of installed packages appears.

Manual shell initialization

Once installation has successfully completed, initialize your shell by running the following command:

```
# Replace <PATH_TO_CONDA> with the path to your conda install
source <PATH_TO_CONDA>/bin/activate
conda init --all
```

Note: macOS 10.15 and later use zsh as the default shell. Once installation process has completed, initialize conda in a zsh shell by running the following commands:

```
source <PATH_TO_CONDA>/bin/activate
conda init zsh
```

For information on installing in silent mode, see the *Quick command line install* commands for examples or the Installing in silent mode section of Installing on macOS in the conda project documentation.

Linux terminal installer

1. Download the latest version of Miniconda by opening a terminal and running one of the following commands (depending on your Linux architecture):

Linux x86

```
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-
↪x86_64.sh
```

AWS Graviton2/ARM64

```
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-
↪aarch64.sh
```

- The `linux-aarch64` package builds might not be compatible with certain Raspberry Pi setups, as Anaconda uses compiler options that target the server-class Neoverse N1/N2 microarchitecture.

IBMZ/LinuxOne/s390x

```
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-
↪s390x.sh
```

To download a different version

View a full list of Miniconda installers in the official Miniconda archive.

To download a different version of Miniconda, copy the **Filename** of an installer from the archive, then download it using a `wget` command:

```
# Replace <FILENAME> with the installer Filename you copied from␣
↪the archive
wget https://repo.anaconda.com/miniconda/<FILENAME>
```

> **Caution:** Ensure that you are downloading an installer that is compatible with your operating system!

2. (Optional) Anaconda recommends verifying the integrity of the installer after downloading it.

How do I verify my installer's integrity?

To ensure that your downloaded installer has not been tampered with or corrupted, generate its SHA-256 hash value and compare it to the official hash provided in the archive.

1. Open Terminal and run the following command:

   ```
   # Replace <FILE_NAME> with the path to your installer
   sha256sum <FILE_NAME>
   ```

   For example:

   ```
   sha256sum ~/Downloads/Miniconda3-latest-Linux-x86_64.sh
   ```

2. Note the generated SHA-256 hash value from the output.
3. Visit repo.anaconda.com/miniconda to find the official SHA-256 hash for your installer.
4. Compare the hash values. If they match, the installer is safe to use.

Tip: For more information, see cryptographic hash verification in the official conda documentation.

---

3. Install Miniconda by running one of the following commands (depending on your Linux architecture):

Linux x86

```
bash ~/Miniconda3-latest-Linux-x86_64.sh
```

AWS Graviton2/ARM64

```
bash ~/Miniconda3-latest-Linux-aarch64.sh
```

IBMZ/LinuxOne/s390x

```
bash ~/Miniconda3-latest-Linux-s390x.sh
```

4. Press Return to review Anaconda's Terms of Service (TOS). Then press and hold Return to scroll.
5. Enter `yes` to agree to the TOS.
6. Press Return to accept the default install location (`PREFIX=/Users/<USER>/miniconda3`), or enter another file path to specify an alternate installation directory. The installation might take a few minutes to complete.
7. Choose an initialization options:
   - Yes - `conda` modifies your shell configuration to initialize conda whenever you open a new shell and to recognize conda commands automatically.
   - No - `conda` will not modify your shell scripts. After installation, if you want to initialize, you must do so manually. For more information, see *Manual shell initialization*.
8. The installer finishes and displays, "Thank you for installing Miniconda3!"
9. Close and re-open your terminal window for the installation to fully take effect, or use the following command to refresh the terminal, depending on your shell:

Bash

```
source ~/.bashrc
```

Zsh

```
source ~/.zshrc
```

Fish

```
exec fish
```

Note: You should see `(base)` in the command line prompt. This tells you that you're in your base conda environment. To learn more about environments, see *Environments*.

---

10. Test your installation by running `conda list`. If conda has been installed correctly, a list of installed packages appears.

Manual shell initialization

Once installation has successfully completed, initialize your shell by running the following command:

```
# Replace <PATH_TO_CONDA> with the path to your conda install
source <PATH_TO_CONDA>/bin/activate
conda init --all
```

Note: macOS 10.15 and later use zsh as the default shell. Once installation process has completed, initialize conda in a zsh shell by running the following commands:

```
source <PATH_TO_CONDA>/bin/activate
conda init zsh
```

For information on installing in silent mode, see the *Quick command line install* commands for examples or the Installing in silent mode section of Installing on macOS in the conda project documentation.

Verify your install

Verify your installation of Miniconda by using the CLI:

1. Access the CLI for your operating system:

Windows

1. Search for "Anaconda Prompt" in the taskbar search.
2. Select **Anaconda Prompt**.

macOS

1. Use Cmd+Spacebar to open Spotlight Search.
2. Type "Terminal" and press Return to open.

Linux

In most Linux distributions, use Ctrl+Alt+T to open a terminal application.

You should see `(base)` in the command line prompt. This tells you that you're in your base conda environment. To learn more about environments, see *Environments*.

2. Run any conda command. For example:
   - `conda list` - Displays a list of packages installed in your active environment and their versions.
   - `conda --version` - Displays `conda`'s version number.

Quickstart install instructions

These command line instructions will get you set up quickly with the latest Miniconda installer. Follow the steps for your system to download and install Miniconda, then follow the steps in **Verify your install** above to verify your Miniconda installation.

> **Caution:** These quick install commands run a silent install. If you run a silent install, you are accepting Anaconda's Terms of Service (TOS) by default. Please make sure to review Anaconda's full TOS here before proceeding with silent installations.

Windows Command Prompt

These three commands quickly and quietly download the latest 64-bit Windows installer, rename it to a shorter file name, perform a silent install, and then delete the installer:

```
curl https://repo.anaconda.com/miniconda/Miniconda3-latest-Windows-x86_64.exe -o .\
↪miniconda.exe
start /wait "" .\miniconda.exe /S
del .\miniconda.exe
```

To download an older version

You can find older versions of the Windows installer at https://repo.anaconda.com/miniconda.

For example, to download an older version of Miniconda for Python 3.12 for a 64-bit Windows computer, replace the `curl` command for the latest installer with the following `curl` command instead:

```
curl https://repo.anaconda.com/miniconda/Miniconda3-py312_24.5.0-0-Windows-x86_64.exe -o␣
↪.\miniconda.exe
```

After installing, open the "Anaconda Prompt (miniconda3)" program to use Miniconda3.

Windows PowerShell

These three commands quickly and quietly download the latest 64-bit Windows installer, rename it to a shorter file name, perform a silent install, and then delete the installer:

```
wget "https://repo.anaconda.com/miniconda/Miniconda3-latest-Windows-x86_64.exe" -outfile
↪".\miniconda.exe"
Start-Process -FilePath ".\miniconda.exe" -ArgumentList "/S" -Wait
del .\miniconda.exe
```

To download an older version

You can find older versions of the Windows installer at https://repo.anaconda.com/miniconda/.

For example, to download an older version of Miniconda for Python 3.12 for a 64-bit Windows computer, replace the `wget` command for the latest installer with the following `wget` command instead:

```
wget "https://repo.anaconda.com/miniconda/Miniconda3-py312_24.5.0-0-Windows-x86_64.exe" -
↪outfile ".\miniconda.exe"
```

After installing, open the "Anaconda Powershell Prompt (miniconda3)".

macOS

1. Run the following four commands to download and install the latest macOS installer for your chosen chip architecture. Line by line, these commands:
    - create a new directory named "miniconda3" in your home directory.
    - download the macOS Miniconda installation script for your chosen chip architecture and save the script as `miniconda.sh` in the miniconda3 directory.
    - run the `miniconda.sh` installation script in silent mode using bash.
    - remove the `miniconda.sh` installation script file after installation is complete.

Apple Silicon

```
mkdir -p ~/miniconda3
curl https://repo.anaconda.com/miniconda/Miniconda3-latest-MacOSX-arm64.sh -
↪o ~/miniconda3/miniconda.sh
bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
rm ~/miniconda3/miniconda.sh
```

Intel

```
mkdir -p ~/miniconda3
curl https://repo.anaconda.com/miniconda/Miniconda3-latest-MacOSX-x86_64.sh␣
↪-o ~/miniconda3/miniconda.sh
bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
rm ~/miniconda3/miniconda.sh
```

To download an older version

You can find different versions of the macOS installer at https://repo.anaconda.com/miniconda.

For example, to download an older version of Miniconda for Python 3.12 for an M1 macOS computer, replace the `curl` command for the latest installer with the following `curl` command instead:

```
curl https://repo.anaconda.com/miniconda/Miniconda3-py312_24.5.0-0-MacOSX-
↪arm64.sh -o ~/miniconda3/miniconda.sh
```

Or to download an older version of Miniconda for Python 3.9 for an Intel chip macOS computer, replace the `curl` command for the latest installer with the following `curl` command instead:

```
mkdir -p ~/miniconda3
curl https://repo.anaconda.com/miniconda/Miniconda3-py39_24.5.0-0-MacOSX-
↪x86_64.sh -o ~/miniconda3/miniconda.sh
```

2. After installing, close and reopen your terminal application or refresh it by running the following command:

```
source ~/miniconda3/bin/activate
```

3. Then, initialize conda on all available shells by running the following command:

```
conda init --all
```

If you don't initialize conda after installation, you might see a "conda not found" error, even though conda is installed. See the *Conda: command not found on macOS/Linux* troubleshooting topic for possible solutions.

Linux

1. Run the following four commands to download and install the latest Linux installer for your chosen chip architecture. Line by line, these commands:
   - create a new directory named "miniconda3" in your home directory.
   - download the Linux Miniconda installation script for your chosen chip architecture and save the script as `miniconda.sh` in the miniconda3 directory.
   - run the `miniconda.sh` installation script in silent mode using bash.
   - remove the `miniconda.sh` installation script file after installation is complete.

64-bit

```
mkdir -p ~/miniconda3
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh -
↪O ~/miniconda3/miniconda.sh
bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
rm ~/miniconda3/miniconda.sh
```

AWS Graviton 2/ARM 64

```
mkdir -p ~/miniconda3
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-aarch64.sh␣
↪-O ~/miniconda3/miniconda.sh
bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
rm ~/miniconda3/miniconda.sh
```

IBM Z

```
mkdir -p ~/miniconda3
wget https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-s390x.sh -
↪O ~/miniconda3/miniconda.sh
bash ~/miniconda3/miniconda.sh -b -u -p ~/miniconda3
rm ~/miniconda3/miniconda.sh
```

To download an older version

You can find different versions of the macOS installer at https://repo.anaconda.com/miniconda.

For example, to download an older version of Miniconda for Python 3.12 for an 64-bit version of Linux, replace the `wget` command for the latest installer with the following `wget` command instead:

```
wget https://repo.anaconda.com/miniconda/Miniconda3-py312_24.5.0-0-Linux-
↪x86_64.sh -O ~/miniconda3/miniconda.sh
```

2. After installing, close and reopen your terminal application or refresh it by running the following command:

```
source ~/miniconda3/bin/activate
```

3. Then, initialize conda on all available shells by running the following command:

```
conda init --all
```

If you don't initialize conda after installation, you might see a "conda not found" error, even though conda is installed. See the *Conda: command not found on macOS/Linux* troubleshooting topic for possible solutions.

Miniconda release notes

Miniconda 25.1.1-2 (Feb 11, 2025)

Available Python versions: 3.12.9, 3.11.11, 3.10.16, 3.9.21

Bug fixes

- Update `conda-anaconda-tos` version to `0.1.2`.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
anaconda-anon-usage	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
anaconda_powershell_prompt						1.1.0
anaconda_prompt						1.1.0
annotated-types	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.3
certifi	2025.1.31	2025.1.31	2025.1.31	2025.1.31	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.40					
ld_impl_linux-aarch64		2.40				
ld_impl_linux-s390x			2.40			
libarchive	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0			

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4	6.4	6.4	
nlohmann_json	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2	24.2	24.2	24.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	25.0	25.0	25.0	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.9	3.12.9	3.12.9	3.12.9	3.12.9	3.12.9
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.67.1	4.67.1	4.67.1	4.67.1	4.67.1	4.67.1
truststore	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a	2025a	2025a	2025a
urllib3	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
vc						14.42
vs2015_runtime						14.42.344
wheel	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.5.0	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31	2024.12.31
certifi	2025.1.31	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.2	0.1.2	0.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
libarchive	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.5	2.13.5	2.13.5

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Package Name	linux-64	linux-aarch64	linux-s390x
lz4-c	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4
nlohmann_json	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2
pcre2	10.42	10.42	10.42
pip	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.9	3.12.9	3.12.9
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.67.1	4.67.1	4.67.1
truststore	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a
urllib3	2.3.0	2.3.0	2.3.0
wheel	0.45.1	0.45.1	0.45.1
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0
archspec	0.2.3	0.2.3
boltons	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31
certifi	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2
conda	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2
conda-anaconda-tos	0.1.2	0.1.2
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0
cryptography	43.0.3	43.0.3
distro	1.9.0	1.9.0
expat	2.6.4	2.6.4
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.7.7	3.7.7
libcurl	8.11.1	8.11.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0
libsolv	0.7.30	0.7.30
libssh2	1.11.1	1.11.1
libxml2	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0
mdurl	0.1.0	0.1.0
menuinst	2.2.0	2.2.0
ncurses	6.4	6.4
nlohmann_json	3.11.2	3.11.2
openssl	3.0.15	3.0.15

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Table 219 – continued from previous page

Package Name	osx-arm64	osx-64
packaging	24.2	24.2
pcre2	10.42	10.42
pip	25.0	25.0
platformdirs	3.10.0	3.10.0
pluggy	1.5.0	1.5.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pydantic	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1
pygments	2.15.1	2.15.1
pysocks	1.7.1	1.7.1
python	3.12.9	3.12.9
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
rich	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
setuptools	75.8.0	75.8.0
simdjson	3.10.1	3.10.1
spdlog	1.11.0	1.11.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.67.1	4.67.1
truststore	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2
tzdata	2025a	2025a
urllib3	2.3.0	2.3.0
wheel	0.45.1	0.45.1
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
anaconda-anon-usage	0.5.0
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
annotated-types	0.6.0
archspec	0.2.3
boltons	24.1.0

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Table 220 – continued from previous page

Package Name	win-64
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.12.31
certifi	2025.1.31
cffi	1.17.1
charset-normalizer	3.3.2
colorama	0.4.6
conda	25.1.1
conda-anaconda-telemetry	0.1.2
conda-anaconda-tos	0.1.2
conda-content-trust	0.2.0
conda-libmamba-solver	25.1.1
conda-package-handling	2.4.0
conda-package-streaming	0.11.0
cpp-expected	1.1.0
cryptography	43.0.3
distro	1.9.0
expat	2.6.4
fmt	9.1.0
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.7.7
libcurl	8.11.1
libffi	3.4.4
libiconv	1.16
libmamba	2.0.5
libmambapy	2.0.5
libsolv	0.7.30
libssh2	1.11.1
libxml2	2.13.5
lz4-c	1.9.4
markdown-it-py	2.2.0
mdurl	0.1.0
menuinst	2.2.0
nlohmann_json	3.11.2
openssl	3.0.15
packaging	24.2
pcre2	10.42
pip	25.0
platformdirs	3.10.0
pluggy	1.5.0
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pydantic	2.10.3
pydantic-core	2.27.1
pygments	2.15.1
pysocks	1.7.1

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Table 220 – continued from previous page

Package Name	win-64
python	3.12.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
rich	13.9.4
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
setuptools	75.8.0
simdjson	3.10.1
spdlog	1.11.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.67.1
truststore	0.10.0
typing-extensions	4.12.2
typing_extensions	4.12.2
tzdata	2025a
urllib3	2.3.0
vc	14.42
vs2015_runtime	14.42.34433
wheel	0.45.1
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.23.0
zstd	1.5.6

Miniconda 25.1.1-1 (Feb 10, 2025)

Available Python versions: 3.12.9, 3.11.11, 3.10.16, 3.9.21

Bug Fixes

- Fixes a “The system cannot find the drive specified” error in the Windows post-install scripts.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			

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Table 221 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
anaconda-anon-usage	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
anaconda_powershell_prompt						1.1.0
anaconda_prompt						1.1.0
annotated-types	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.3
certifi	2025.1.31	2025.1.31	2025.1.31	2025.1.31	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.40					
ld_impl_linux-aarch64		2.40				
ld_impl_linux-s390x			2.40			
libarchive	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0			

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Table 221 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4	6.4	6.4	
nlohmann_json	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2	24.2	24.2	24.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	25.0	25.0	25.0	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.9	3.12.9	3.12.9	3.12.9	3.12.9	3.12.9
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.67.1	4.67.1	4.67.1	4.67.1	4.67.1	4.67.1
truststore	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a	2025a	2025a	2025a
urllib3	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
vc						14.42
vs2015_runtime						14.42.344
wheel	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.5.0	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31	2024.12.31
certifi	2025.1.31	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
libarchive	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.5	2.13.5	2.13.5

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Table 222 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
lz4-c	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4
nlohmann_json	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2
pcre2	10.42	10.42	10.42
pip	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.9	3.12.9	3.12.9
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.67.1	4.67.1	4.67.1
truststore	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a
urllib3	2.3.0	2.3.0	2.3.0
wheel	0.45.1	0.45.1	0.45.1
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0
archspec	0.2.3	0.2.3
boltons	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31
certifi	2025.1.31	2025.1.31
cffi	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2
conda	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0
cryptography	43.0.3	43.0.3
distro	1.9.0	1.9.0
expat	2.6.4	2.6.4
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.7.7	3.7.7
libcurl	8.11.1	8.11.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0
libsolv	0.7.30	0.7.30
libssh2	1.11.1	1.11.1
libxml2	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0
mdurl	0.1.0	0.1.0
menuinst	2.2.0	2.2.0
ncurses	6.4	6.4
nlohmann_json	3.11.2	3.11.2
openssl	3.0.15	3.0.15

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Table 223 – continued from previous page

Package Name	osx-arm64	osx-64
packaging	24.2	24.2
pcre2	10.42	10.42
pip	25.0	25.0
platformdirs	3.10.0	3.10.0
pluggy	1.5.0	1.5.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pydantic	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1
pygments	2.15.1	2.15.1
pysocks	1.7.1	1.7.1
python	3.12.9	3.12.9
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
rich	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
setuptools	75.8.0	75.8.0
simdjson	3.10.1	3.10.1
spdlog	1.11.0	1.11.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.67.1	4.67.1
truststore	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2
tzdata	2025a	2025a
urllib3	2.3.0	2.3.0
wheel	0.45.1	0.45.1
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
anaconda-anon-usage	0.5.0
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
annotated-types	0.6.0
archspec	0.2.3
boltons	24.1.0

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Table 224 – continued from previous page

Package Name	win-64
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.12.31
certifi	2025.1.31
cffi	1.17.1
charset-normalizer	3.3.2
colorama	0.4.6
conda	25.1.1
conda-anaconda-telemetry	0.1.2
conda-anaconda-tos	0.1.1
conda-content-trust	0.2.0
conda-libmamba-solver	25.1.1
conda-package-handling	2.4.0
conda-package-streaming	0.11.0
cpp-expected	1.1.0
cryptography	43.0.3
distro	1.9.0
expat	2.6.4
fmt	9.1.0
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.7.7
libcurl	8.11.1
libffi	3.4.4
libiconv	1.16
libmamba	2.0.5
libmambapy	2.0.5
libsolv	0.7.30
libssh2	1.11.1
libxml2	2.13.5
lz4-c	1.9.4
markdown-it-py	2.2.0
mdurl	0.1.0
menuinst	2.2.0
nlohmann_json	3.11.2
openssl	3.0.15
packaging	24.2
pcre2	10.42
pip	25.0
platformdirs	3.10.0
pluggy	1.5.0
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pydantic	2.10.3
pydantic-core	2.27.1
pygments	2.15.1
pysocks	1.7.1

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Package Name	win-64
python	3.12.9
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
rich	13.9.4
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
setuptools	75.8.0
simdjson	3.10.1
spdlog	1.11.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.67.1
truststore	0.10.0
typing-extensions	4.12.2
typing_extensions	4.12.2
tzdata	2025a
urllib3	2.3.0
vc	14.42
vs2015_runtime	14.42.34433
wheel	0.45.1
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.23.0
zstd	1.5.6

Miniconda 25.1.1-0 (Feb 06, 2025)

Available Python versions: 3.12.8, 3.11.11, 3.10.16, 3.9.21

User-facing changes

- Conda has been updated to v25.1.1.
- A `conda` plugin (`conda-anaconda-tos`) has been added that prompts users to accept or reject the Anaconda Terms of Service when updated terms are available. This plugin is currently *inactive*, pending the publication of a blogpost with further details about it (a link to the blog will also be added here when it is published).

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
anaconda_powershell_prompt						1.1.0
anaconda_prompt						1.1.0
annotated-types	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.31	2024.12.3
certifi	2024.12.14	2024.12.14	2024.12.14	2024.12.14	2024.12.14	2024.12.1
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.40					
ld_impl_linux-aarch64		2.40				
ld_impl_linux-s390x			2.40			
libarchive	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1	8.11.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4	6.4	6.4	
nlohmann_json	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2	24.2	24.2	24.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	25.0	25.0	25.0	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.8	3.12.8	3.12.8	3.12.8	3.12.8	3.12.8
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5
truststore	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a	2025a	2025a	2025a
urllib3	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
vc						14.40

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Table 225 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
vs2015_runtime						14.42.344
wheel	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1	0.45.1
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.5.0	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0	0.6.0
archspec	0.2.3	0.2.3	0.2.3
boltons	24.1.0	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31	2024.12.31
certifi	2024.12.14	2024.12.14	2024.12.14
cffi	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	25.1.1	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0	1.1.0
cryptography	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
libarchive	3.7.7	3.7.7	3.7.7
libcurl	8.11.1	8.11.1	8.11.1

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Table 226 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	2.0.5	2.0.5	2.0.5
libmambapy	2.0.5	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.30	0.7.30	0.7.30
libssh2	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0	2.2.0
mdurl	0.1.0	0.1.0	0.1.0
menuinst	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4
nlohmann_json	3.11.2	3.11.2	3.11.2
openssl	3.0.15	3.0.15	3.0.15
packaging	24.2	24.2	24.2
pcre2	10.42	10.42	10.42
pip	25.0	25.0	25.0
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pydantic	2.10.3	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1	2.27.1
pygments	2.15.1	2.15.1	2.15.1
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.8	3.12.8	3.12.8
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
rich	13.9.4	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
setuptools	75.8.0	75.8.0	75.8.0
simdjson	3.10.1	3.10.1	3.10.1
spdlog	1.11.0	1.11.0	1.11.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5
truststore	0.10.0	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2	4.12.2
tzdata	2025a	2025a	2025a

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Table 226 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
urllib3	2.3.0	2.3.0	2.3.0
wheel	0.45.1	0.45.1	0.45.1
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.5.0	0.5.0
annotated-types	0.6.0	0.6.0
archspec	0.2.3	0.2.3
boltons	24.1.0	24.1.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.12.31	2024.12.31
certifi	2024.12.14	2024.12.14
cffi	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2
conda	25.1.1	25.1.1
conda-anaconda-telemetry	0.1.2	0.1.2
conda-anaconda-tos	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	25.1.1	25.1.1
conda-package-handling	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0
cpp-expected	1.1.0	1.1.0
cryptography	43.0.3	43.0.3
distro	1.9.0	1.9.0
expat	2.6.4	2.6.4
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.7.7	3.7.7
libcurl	8.11.1	8.11.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	2.0.5	2.0.5

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Table 227 – continued from previous page

Package Name	osx-arm64	osx-64
libmambapy	2.0.5	2.0.5
libnghttp2	1.57.0	1.57.0
libsolv	0.7.30	0.7.30
libssh2	1.11.1	1.11.1
libxml2	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4
markdown-it-py	2.2.0	2.2.0
mdurl	0.1.0	0.1.0
menuinst	2.2.0	2.2.0
ncurses	6.4	6.4
nlohmann_json	3.11.2	3.11.2
openssl	3.0.15	3.0.15
packaging	24.2	24.2
pcre2	10.42	10.42
pip	25.0	25.0
platformdirs	3.10.0	3.10.0
pluggy	1.5.0	1.5.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pydantic	2.10.3	2.10.3
pydantic-core	2.27.1	2.27.1
pygments	2.15.1	2.15.1
pysocks	1.7.1	1.7.1
python	3.12.8	3.12.8
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
rich	13.9.4	13.9.4
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
setuptools	75.8.0	75.8.0
simdjson	3.10.1	3.10.1
spdlog	1.11.0	1.11.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.5	4.66.5
truststore	0.10.0	0.10.0
typing-extensions	4.12.2	4.12.2
typing_extensions	4.12.2	4.12.2
tzdata	2025a	2025a
urllib3	2.3.0	2.3.0
wheel	0.45.1	0.45.1
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
anaconda-anon-usage	0.5.0
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
annotated-types	0.6.0
archspec	0.2.3
boltons	24.1.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.12.31
certifi	2024.12.14
cffi	1.17.1
charset-normalizer	3.3.2
colorama	0.4.6
conda	25.1.1
conda-anaconda-telemetry	0.1.2
conda-anaconda-tos	0.1.1
conda-content-trust	0.2.0
conda-libmamba-solver	25.1.1
conda-package-handling	2.4.0
conda-package-streaming	0.11.0
cpp-expected	1.1.0
cryptography	43.0.3
distro	1.9.0
expat	2.6.4
fmt	9.1.0
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.7.7
libcurl	8.11.1
libffi	3.4.4
libiconv	1.16
libmamba	2.0.5
libmambapy	2.0.5
libsolv	0.7.30
libssh2	1.11.1
libxml2	2.13.5
lz4-c	1.9.4
markdown-it-py	2.2.0
mdurl	0.1.0
menuinst	2.2.0
nlohmann_json	3.11.2
openssl	3.0.15
packaging	24.2
pcre2	10.42
pip	25.0
platformdirs	3.10.0
pluggy	1.5.0

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Package Name	win-64
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pydantic	2.10.3
pydantic-core	2.27.1
pygments	2.15.1
pysocks	1.7.1
python	3.12.8
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
rich	13.9.4
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
setuptools	75.8.0
simdjson	3.10.1
spdlog	1.11.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.5
truststore	0.10.0
typing-extensions	4.12.2
typing_extensions	4.12.2
tzdata	2025a
urllib3	2.3.0
vc	14.40
vs2015_runtime	14.42.34433
wheel	0.45.1
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.23.0
zstd	1.5.6

Miniconda 24.11.1-0 (Dec 16, 2024)

Available Python versions: 3.12.8, 3.11.11, 3.10.16, 3.9.21

User-facing changes

- Conda has been updated to v24.11.1.
- Significant improvements for uninstallers:
  - macOS and Linux installations now come with an `uninstall.sh` file that removes the Miniconda installation. Additional options allow users to remove data files (`$HOME/.conda`), `.condarc` files, and cache files during the uninstallation. For more information, see our documentation.

  - Windows uninstallers will come with an extra page that allows users to delete data files (`%USERPROFILE%\.conda`), `.condarc` files, and cache files during the uninstallation. For more information, see our documentation.

- A new Anaconda telemetry plug-in has been added that captures anonymous data on package installation and searches. Anonymous telemetry data is collected for the following commands: `conda create`, `conda install`, `conda search`, and `conda list`.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0	0.5.0
anaconda_powershell_prompt						1.1.0
anaconda_prompt						1.1.0
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.11.26	2024.11.26	2024.11.26	2024.11.26	2024.11.26	2024.11.2
certifi	2024.8.30	2024.8.30	2024.8.30	2024.8.30	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	24.11.1	24.11.1	24.11.1	24.11.1	24.11.1	24.11.1
conda-anaconda-telemetry	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0
conda-package-handling	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0	0.11.0
cryptography	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.40					
ld_impl_linux-aarch64		2.40				
ld_impl_linux-s390x			2.40			
libarchive	3.7.4	3.7.4	3.7.4	3.7.4	3.7.4	3.7.4
libcurl	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1

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Table 229 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.11	1.5.11	1.5.11	1.5.11	1.5.11	1.5.11
libmambapy	1.5.11	1.5.11	1.5.11	1.5.11	1.5.11	1.5.11
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
packaging	24.1	24.1	24.1	24.1	24.1	24.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	24.2	24.2	24.2	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.8	3.12.8	3.12.8	3.12.8	3.12.8	3.12.8
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
setuptools	75.1.0	75.1.0	75.1.0	75.1.0	75.1.0	75.1.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024b	2024b	2024b	2024b	2024b	2024b
urllib3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3
vc						14.40
vs2015_runtime						14.42.344
wheel	0.44.0	0.44.0	0.44.0	0.44.0	0.44.0	0.44.0
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13

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Table 229 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.5.0	0.5.0	0.5.0
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.11.26	2024.11.26	2024.11.26
certifi	2024.8.30	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	24.11.1	24.11.1	24.11.1
conda-anaconda-telemetry	0.1.1	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0
conda-package-handling	2.4.0	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0	0.11.0
cryptography	43.0.3	43.0.3	43.0.3
distro	1.9.0	1.9.0	1.9.0
expat	2.6.4	2.6.4	2.6.4
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
libarchive	3.7.4	3.7.4	3.7.4
libcurl	8.9.1	8.9.1	8.9.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.11	1.5.11	1.5.11
libmambapy	1.5.11	1.5.11	1.5.11
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24

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Table 230 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
libssh2	1.11.1	1.11.1	1.11.1
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.5	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.2.0	2.2.0	2.2.0
ncurses	6.4	6.4	6.4
openssl	3.0.15	3.0.15	3.0.15
packaging	24.1	24.1	24.1
pcre2	10.42	10.42	10.42
pip	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.5.0	1.5.0	1.5.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.8	3.12.8	3.12.8
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
setuptools	75.1.0	75.1.0	75.1.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024b	2024b	2024b
urllib3	2.2.3	2.2.3	2.2.3
wheel	0.44.0	0.44.0	0.44.0
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.5.0	0.5.0
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.11.26	2024.11.26

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Table 231 – continued from previous page

Package Name	osx-arm64	osx-64
certifi	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2
conda	24.11.1	24.11.1
conda-anaconda-telemetry	0.1.1	0.1.1
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0
conda-package-handling	2.4.0	2.4.0
conda-package-streaming	0.11.0	0.11.0
cryptography	43.0.3	43.0.3
distro	1.9.0	1.9.0
expat	2.6.4	2.6.4
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.7.4	3.7.4
libcurl	8.9.1	8.9.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.11	1.5.11
libmambapy	1.5.11	1.5.11
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.11.1	1.11.1
libxml2	2.13.5	2.13.5
lz4-c	1.9.4	1.9.4
menuinst	2.2.0	2.2.0
ncurses	6.4	6.4
openssl	3.0.15	3.0.15
packaging	24.1	24.1
pcre2	10.42	10.42
pip	24.2	24.2
platformdirs	3.10.0	3.10.0
pluggy	1.5.0	1.5.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.8	3.12.8
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4

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Table 231 – continued from previous page

Package Name	osx-arm64	osx-64
requests	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
setuptools	75.1.0	75.1.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.5	4.66.5
truststore	0.8.0	0.8.0
tzdata	2024b	2024b
urllib3	2.2.3	2.2.3
wheel	0.44.0	0.44.0
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
anaconda-anon-usage	0.5.0
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.11.26
certifi	2024.8.30
cffi	1.17.1
charset-normalizer	3.3.2
colorama	0.4.6
conda	24.11.1
conda-anaconda-telemetry	0.1.1
conda-content-trust	0.2.0
conda-libmamba-solver	24.9.0
conda-package-handling	2.4.0
conda-package-streaming	0.11.0
cryptography	43.0.3
distro	1.9.0
expat	2.6.4
fmt	9.1.0
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.7.4
libcurl	8.9.1

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Package Name	win-64
libffi	3.4.4
libiconv	1.16
libmamba	1.5.11
libmambapy	1.5.11
libsolv	0.7.24
libssh2	1.11.1
libxml2	2.13.5
lz4-c	1.9.4
menuinst	2.2.0
openssl	3.0.15
packaging	24.1
pcre2	10.42
pip	24.2
platformdirs	3.10.0
pluggy	1.5.0
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.8
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
setuptools	75.1.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.5
truststore	0.8.0
tzdata	2024b
urllib3	2.2.3
vc	14.40
vs2015_runtime	14.42.34433
wheel	0.44.0
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.23.0
zstd	1.5.6

Miniconda 24.9.2-0 (Oct 23, 2024)

Available Python versions: 3.12.7, 3.11.10, 3.10.15, 3.9.20

User-facing Changes

- Conda has been updated to v24.9.2.
- A .condarc file is written into the installation directory to set the channel to Anaconda's defaults channels.
- Windows Start Menu entries are now inside separate Anaconda directories for each Miniconda installation.
- For single-user installations, Anaconda Prompt and Anaconda PowerShell Prompt have been added to the Windows Terminal profile list and can be launched directly from the tab dropdown menu (Windows 11). Windows Terminal is available in the Microsoft Store.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
anaconda_powershell_prompt						1.1.0
anaconda_prompt						1.1.0
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.9.24	2024.9.24	2024.9.24	2024.9.24	2024.9.24	2024.9.24
certifi	2024.8.30	2024.8.30	2024.8.30	2024.8.30	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	24.9.2	24.9.2	24.9.2	24.9.2	24.9.2	24.9.2
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0	24.9.0
conda-package-handling	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
cryptography	43.0.0	43.0.0	43.0.0	43.0.0	43.0.0	43.0.0
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.3	2.6.3	2.6.3	2.6.3	2.6.3	2.6.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.40					
ld_impl_linux-aarch64		2.40				
ld_impl_linux-s390x			2.40			
libarchive	3.7.4	3.7.4	3.7.4	3.7.4	3.7.4	3.7.4
libcurl	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1	8.9.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.1	2.13.1	2.13.1	2.13.1	2.13.1	2.13.1
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15	3.0.15
packaging	24.1	24.1	24.1	24.1	24.1	24.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	24.2	24.2	24.2	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.7	3.12.7	3.12.7	3.12.7	3.12.7	3.12.7
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8	0.2.8
setuptools	75.1.0	75.1.0	75.1.0	75.1.0	75.1.0	75.1.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5	4.66.5
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024b	2024b	2024b	2024b	2024b	2024b
urllib3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3	2.2.3

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Table 233 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
vc						14.40
vs2015_runtime						14.40.338
wheel	0.44.0	0.44.0	0.44.0	0.44.0	0.44.0	0.44.0
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6	1.5.6

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.9.24	2024.9.24	2024.9.24
certifi	2024.8.30	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	24.9.2	24.9.2	24.9.2
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0	24.9.0
conda-package-handling	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0
cryptography	43.0.0	43.0.0	43.0.0
distro	1.9.0	1.9.0	1.9.0
expat	2.6.3	2.6.3	2.6.3
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.40		
ld_impl_linux-aarch64		2.40	
ld_impl_linux-s390x			2.40
libarchive	3.7.4	3.7.4	3.7.4
libcurl	8.9.1	8.9.1	8.9.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4

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Table 234 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.1	2.13.1	2.13.1
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.1.2	2.1.2	2.1.2
ncurses	6.4	6.4	6.4
openssl	3.0.15	3.0.15	3.0.15
packaging	24.1	24.1	24.1
pcre2	10.42	10.42	10.42
pip	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.7	3.12.7	3.12.7
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8	0.2.8
setuptools	75.1.0	75.1.0	75.1.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.5	4.66.5	4.66.5
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024b	2024b	2024b
urllib3	2.2.3	2.2.3	2.2.3
wheel	0.44.0	0.44.0	0.44.0
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.23.0	0.23.0	0.23.0
zstd	1.5.6	1.5.6	1.5.6

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.4.4	0.4.4
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.9.24	2024.9.24
certifi	2024.8.30	2024.8.30
cffi	1.17.1	1.17.1
charset-normalizer	3.3.2	3.3.2
conda	24.9.2	24.9.2
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.9.0	24.9.0
conda-package-handling	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0
cryptography	43.0.0	43.0.0
distro	1.9.0	1.9.0
expat	2.6.3	2.6.3
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.7.4	3.7.4
libcurl	8.9.1	8.9.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.11.0	1.11.0
libxml2	2.13.1	2.13.1
lz4-c	1.9.4	1.9.4
menuinst	2.1.2	2.1.2
ncurses	6.4	6.4
openssl	3.0.15	3.0.15
packaging	24.1	24.1
pcre2	10.42	10.42
pip	24.2	24.2
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6

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Table 235 – continued from previous page

Package Name	osx-arm64	osx-64
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.7	3.12.7
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
ruamel.yaml	0.18.6	0.18.6
ruamel.yaml.clib	0.2.8	0.2.8
setuptools	75.1.0	75.1.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.5	4.66.5
truststore	0.8.0	0.8.0
tzdata	2024b	2024b
urllib3	2.2.3	2.2.3
wheel	0.44.0	0.44.0
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.23.0	0.23.0
zstd	1.5.6	1.5.6

Windows

Package Name	win-64
anaconda-anon-usage	0.4.4
anaconda_powershell_prompt	1.1.0
anaconda_prompt	1.1.0
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.9.24
certifi	2024.8.30
cffi	1.17.1
charset-normalizer	3.3.2
colorama	0.4.6
conda	24.9.2
conda-content-trust	0.2.0
conda-libmamba-solver	24.9.0
conda-package-handling	2.3.0
conda-package-streaming	0.10.0
cryptography	43.0.0
distro	1.9.0
expat	2.6.3
fmt	9.1.0

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Package Name	win-64
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.7.4
libcurl	8.9.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.8
libmambapy	1.5.8
libsolv	0.7.24
libssh2	1.11.0
libxml2	2.13.1
lz4-c	1.9.4
menuinst	2.1.2
openssl	3.0.15
packaging	24.1
pcre2	10.42
pip	24.2
platformdirs	3.10.0
pluggy	1.0.0
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.7
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
setuptools	75.1.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.5
truststore	0.8.0
tzdata	2024b
urllib3	2.2.3
vc	14.40
vs2015_runtime	14.40.33807
wheel	0.44.0
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.23.0
zstd	1.5.6

Miniconda 24.7.1-0 (Aug 22, 2024)

Available Python versions: 3.12.4, 3.11.9, 3.10.14, 3.9.19

User-facing Changes

- Conda has been updated to v24.7.1.

Bug Fixes

- Windows: Fix `OPENSSL_Applink` error when installing Miniconda with `SSLKEYLOGFILE` environment variable. ContinuumIO/anaconda-issues#13408

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.7.2	2024.7.2	2024.7.2	2024.7.2	2024.7.2	2024.7.2
certifi	2024.7.4	2024.7.4	2024.7.4	2024.7.4	2024.7.4	2024.7.4
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2	3.3.2
colorama						0.4.6
conda	24.7.1	24.7.1	24.7.1	24.7.1	24.7.1	24.7.1
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.7.0	24.7.0	24.7.0	24.7.0	24.7.0	24.7.0
conda-package-handling	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
console_shortcut_miniconda						0.1.1
cryptography	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1

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Table 237 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.13.1	2.13.1	2.13.1	2.10.4	2.10.4	2.13.1
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2	2.1.2
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.14	3.0.14	3.0.14	3.0.14	3.0.14	3.0.14
packaging	24.1	24.1	24.1	24.1	24.1	24.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	24.2	24.2	24.2	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.4	3.12.4	3.12.4	3.12.4	3.12.4	3.12.4
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	72.1.0	72.1.0	72.1.0	72.1.0	72.1.0	72.1.0
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.4	4.66.4	4.66.4	4.66.4	4.66.4	4.66.4
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a	2024a	2024a	2024a
urllib3	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
vc						14.40

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
vs2015_runtime						14.40.3
wheel	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.7.2	2024.7.2	2024.7.2
certifi	2024.7.4	2024.7.4	2024.7.4
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	3.3.2	3.3.2	3.3.2
conda	24.7.1	24.7.1	24.7.1
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.7.0	24.7.0	24.7.0
conda-package-handling	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0
cryptography	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0

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Table 238 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.13.1	2.13.1	2.13.1
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.1.2	2.1.2	2.1.2
ncurses	6.4	6.4	6.4
openssl	3.0.14	3.0.14	3.0.14
packaging	24.1	24.1	24.1
pcre2	10.42	10.42	10.42
pip	24.2	24.2	24.2
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.4	3.12.4	3.12.4
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.3	2.32.3	2.32.3
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	72.1.0	72.1.0	72.1.0
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.4	4.66.4	4.66.4
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a
urllib3	2.2.2	2.2.2	2.2.2
wheel	0.43.0	0.43.0	0.43.0
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.4.4	0.4.4
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.7.2	2024.7.2
certifi	2024.7.4	2024.7.4
cffi	1.16.0	1.16.0
charset-normalizer	3.3.2	3.3.2
conda	24.7.1	24.7.1
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.7.0	24.7.0
conda-package-handling	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0
cryptography	42.0.5	42.0.5
distro	1.9.0	1.9.0
expat	2.6.2	2.6.2
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.7.1	8.7.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.11.0	1.11.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.1.2	2.1.2
ncurses	6.4	6.4
openssl	3.0.14	3.0.14
packaging	24.1	24.1
pcre2	10.42	10.42
pip	24.2	24.2
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6

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Table 239 – continued from previous page

Package Name	osx-arm64	osx-64
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.4	3.12.4
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.3	2.32.3
ruamel.yaml	0.17.21	0.17.21
setuptools	72.1.0	72.1.0
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.4	4.66.4
truststore	0.8.0	0.8.0
tzdata	2024a	2024a
urllib3	2.2.2	2.2.2
wheel	0.43.0	0.43.0
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.22.0	0.22.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
anaconda-anon-usage	0.4.4
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.7.2
certifi	2024.7.4
cffi	1.16.0
charset-normalizer	3.3.2
colorama	0.4.6
conda	24.7.1
conda-content-trust	0.2.0
conda-libmamba-solver	24.7.0
conda-package-handling	2.3.0
conda-package-streaming	0.10.0
console_shortcut_miniconda	0.1.1
cryptography	42.0.5
distro	1.9.0
expat	2.6.2
fmt	9.1.0
frozendict	2.4.2
idna	3.7

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Package Name	win-64
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.7.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.8
libmambapy	1.5.8
libsolv	0.7.24
libssh2	1.11.0
libxml2	2.13.1
lz4-c	1.9.4
menuinst	2.1.2
openssl	3.0.14
packaging	24.1
pcre2	10.42
pip	24.2
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.4
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.3
ruamel.yaml	0.17.21
setuptools	72.1.0
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.4
truststore	0.8.0
tzdata	2024a
urllib3	2.2.2
vc	14.40
vs2015_runtime	14.40.33807
wheel	0.43.0
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.22.0
zstd	1.5.5

Miniconda 24.5.0-0 (Jun 26, 2024)

Available Python versions: 3.12.4, 3.11.9, 3.10.14, 3.9.19

User-facing Changes

- Conda has been updated to v24.5.0.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.
certifi	2024.6.2	2024.6.2	2024.6.2	2024.6.2	2024.6.2	2024.6.2
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						0.4.6
conda	24.5.0	24.5.0	24.5.0	24.5.0	24.5.0	24.5.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
conda-package-handling	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0	0.10.0
console_shortcut_miniconda						0.1.1
cryptography	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1	2.1.1
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.14	3.0.14	3.0.14	3.0.14	3.0.14	3.0.14
packaging	23.2	23.2	23.2	23.2	23.2	23.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	24.0	24.0	24.0	24.0	24.0	24.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.4	3.12.4	3.12.4	3.12.4	3.12.4	3.12.4
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.32.2	2.32.2	2.32.2	2.32.2	2.32.2	2.32.2
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	69.5.1	69.5.1	69.5.1	69.5.1	69.5.1	69.5.1
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.4	4.66.4	4.66.4	4.66.4	4.66.4	4.66.4
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a	2024a	2024a	2024a
urllib3	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2	2.2.2
vc						14.2
vs2015_runtime						14.29.3
wheel	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13

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Table 241 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
zstandard	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11	2024.3.11
certifi	2024.6.2	2024.6.2	2024.6.2
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
conda	24.5.0	24.5.0	24.5.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0
conda-package-handling	2.3.0	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0	0.10.0
cryptography	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0
frozendict	2.4.2	2.4.2	2.4.2
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0

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Package Name	linux-64	linux-aarch64	linux-s390x
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.1.1	2.1.1	2.1.1
ncurses	6.4	6.4	6.4
openssl	3.0.14	3.0.14	3.0.14
packaging	23.2	23.2	23.2
pcre2	10.42	10.42	10.42
pip	24.0	24.0	24.0
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.4	3.12.4	3.12.4
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.32.2	2.32.2	2.32.2
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	69.5.1	69.5.1	69.5.1
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.4	4.66.4	4.66.4
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a
urllib3	2.2.2	2.2.2	2.2.2
wheel	0.43.0	0.43.0	0.43.0
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.4.4	0.4.4
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11
certifi	2024.6.2	2024.6.2
cffi	1.16.0	1.16.0

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Table 243 – continued from previous page

Package Name	osx-arm64	osx-64
charset-normalizer	2.0.4	2.0.4
conda	24.5.0	24.5.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0
conda-package-handling	2.3.0	2.3.0
conda-package-streaming	0.10.0	0.10.0
cryptography	42.0.5	42.0.5
distro	1.9.0	1.9.0
expat	2.6.2	2.6.2
fmt	9.1.0	9.1.0
frozendict	2.4.2	2.4.2
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.7.1	8.7.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.11.0	1.11.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.1.1	2.1.1
ncurses	6.4	6.4
openssl	3.0.14	3.0.14
packaging	23.2	23.2
pcre2	10.42	10.42
pip	24.0	24.0
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.4	3.12.4
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.32.2	2.32.2
ruamel.yaml	0.17.21	0.17.21
setuptools	69.5.1	69.5.1

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Table 243 – continued from previous page

Package Name	osx-arm64	osx-64
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.4	4.66.4
truststore	0.8.0	0.8.0
tzdata	2024a	2024a
urllib3	2.2.2	2.2.2
wheel	0.43.0	0.43.0
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.22.0	0.22.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
anaconda-anon-usage	0.4.4
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.3.11
certifi	2024.6.2
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	24.5.0
conda-content-trust	0.2.0
conda-libmamba-solver	24.1.0
conda-package-handling	2.3.0
conda-package-streaming	0.10.0
console_shortcut_miniconda	0.1.1
cryptography	42.0.5
distro	1.9.0
expat	2.6.2
fmt	9.1.0
frozendict	2.4.2
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.7.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.8
libmambapy	1.5.8
libsolv	0.7.24
libssh2	1.11.0

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Table 244 – continued from previous page

Package Name	win-64
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.1.1
openssl	3.0.14
packaging	23.2
pcre2	10.42
pip	24.0
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.4
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.32.2
ruamel.yaml	0.17.21
setuptools	69.5.1
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.4
truststore	0.8.0
tzdata	2024a
urllib3	2.2.2
vc	14.2
vs2015_runtime	14.29.30133
wheel	0.43.0
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.22.0
zstd	1.5.5

Miniconda 24.4.0-0 (May 20, 2024)

Available Python versions: 3.12.3, 3.11.9, 3.10.14, 3.9.19

User-facing Changes

- Conda has been updated to v24.4.0.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.
certifi	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						0.4.6
conda	24.4.0	24.4.0	24.4.0	24.4.0	24.4.0	24.4.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						0.1.1
cryptography	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.7	3.7	3.7	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1	8.7.1
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			

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Table 245 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libiconv				1.16	1.16	1.16
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13
packaging	23.2	23.2	23.2	23.2	23.2	23.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	24.0	24.0	24.0	24.0	24.0	24.0
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	5	5	5	5	5	5
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.3	3.12.3	3.12.3	3.12.3	3.12.3	3.12.3
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	69.5.1	69.5.1	69.5.1	69.5.1	69.5.1	69.5.1
sqlite	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14	8.6.14
tqdm	4.66.2	4.66.2	4.66.2	4.66.2	4.66.2	4.66.2
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a	2024a	2024a	2024a
urllib3	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
vc						14.2
vs2015_runtime						14.27.2
wheel	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0	0.43.0
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11	2024.3.11
certifi	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
conda	24.4.0	24.4.0	24.4.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0
cryptography	42.0.5	42.0.5	42.0.5
distro	1.9.0	1.9.0	1.9.0
expat	2.6.2	2.6.2	2.6.2
fmt	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1
idna	3.7	3.7	3.7
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.7.1	8.7.1	8.7.1
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.11.0	1.11.0	1.11.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4
openssl	3.0.13	3.0.13	3.0.13
packaging	23.2	23.2	23.2

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Table 246 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
pcre2	10.42	10.42	10.42
pip	24.0	24.0	24.0
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	5	5	5
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.3	3.12.3	3.12.3
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	69.5.1	69.5.1	69.5.1
sqlite	3.45.3	3.45.3	3.45.3
tk	8.6.14	8.6.14	8.6.14
tqdm	4.66.2	4.66.2	4.66.2
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a
urllib3	2.1.0	2.1.0	2.1.0
wheel	0.43.0	0.43.0	0.43.0
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.22.0	0.22.0	0.22.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.4.4	0.4.4
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11
certifi	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4
conda	24.4.0	24.4.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	42.0.5	42.0.5
distro	1.9.0	1.9.0

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Table 247 – continued from previous page

Package Name	osx-arm64	osx-64
expat	2.6.2	2.6.2
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.7	3.7
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.7.1	8.7.1
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.11.0	1.11.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.0.2	2.0.2
ncurses	6.4	6.4
openssl	3.0.13	3.0.13
packaging	23.2	23.2
pcre2	10.42	10.42
pip	24.0	24.0
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	5	5
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.3	3.12.3
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	69.5.1	69.5.1
sqlite	3.45.3	3.45.3
tk	8.6.14	8.6.14
tqdm	4.66.2	4.66.2
truststore	0.8.0	0.8.0
tzdata	2024a	2024a
urllib3	2.1.0	2.1.0
wheel	0.43.0	0.43.0
xz	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0

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Table 247 – continued from previous page

Package Name	osx-arm64	osx-64
zlib	1.2.13	1.2.13
zstandard	0.22.0	0.22.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
anaconda-anon-usage	0.4.4
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.3.11
certifi	2024.2.2
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	24.4.0
conda-content-trust	0.2.0
conda-libmamba-solver	24.1.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	42.0.5
distro	1.9.0
expat	2.6.2
fmt	9.1.0
idna	3.7
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.7.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.8
libmambapy	1.5.8
libsolv	0.7.24
libssh2	1.11.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.0.2
openssl	3.0.13
packaging	23.2
pcre2	10.42
pip	24.0
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1

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Package Name	win-64
pybind11-abi	5
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.3
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	69.5.1
sqlite	3.45.3
tk	8.6.14
tqdm	4.66.2
truststore	0.8.0
tzdata	2024a
urllib3	2.1.0
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.43.0
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.22.0
zstd	1.5.5

Miniconda 24.3.0-0 (Apr 15, 2024)

Available Python versions: 3.12.2, 3.11.8, 3.10.14, 3.9.19

User-facing Changes

- Conda has been updated to v24.3.0.
- Anaconda-anon-usage was added to the installer.

Enhancements

- sh installers: progress bars are no longer rendered during batch installations.
- sh installers: available disk space is checked before installing Miniconda.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
anaconda-anon-usage	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.11	2024.3.
certifi	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama			0.4.6			0.4.6
conda	24.3.0	24.3.0	24.3.0	24.3.0	24.3.0	24.3.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						0.1.1
cryptography	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5	42.0.5
distro	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
expat	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.4	3.4	3.3	3.4	3.4	3.4
jsonpatch	1.33	1.33	1.33	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24

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Table 249 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13
packaging	23.2	23.2	23.2	23.2	23.2	23.2
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.2	3.12.2	3.12.2	3.12.2	3.12.2	3.12.2
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.63.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a	2024a	2024a	2024a
urllib3	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
vc						14.2
vs2015_runtime						14.27.2
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						1.1.0
xz	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
anaconda-anon-usage	0.4.4	0.4.4	0.4.4
archspec	0.2.3	0.2.3	0.2.3
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11	2024.3.11
certifi	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
colorama			0.4.6
conda	24.3.0	24.3.0	24.3.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0
cryptography	42.0.5	42.0.5	42.0.5
distro	1.8.0	1.8.0	1.8.0
expat	2.5.0	2.5.0	2.5.0
fmt	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1
idna	3.4	3.4	3.3
jsonpatch	1.33	1.33	1.33
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.5.0	8.5.0	8.5.0
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.8	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4
openssl	3.0.13	3.0.13	3.0.13

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Table 250 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
packaging	23.2	23.2	23.2
pcre2	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.2	3.12.2	3.12.2
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.63.0
truststore	0.8.0	0.8.0	0.8.0
tzdata	2024a	2024a	2024a
urllib3	2.1.0	2.1.0	2.1.0
wheel	0.41.2	0.41.2	0.41.2
xz	5.4.6	5.4.6	5.4.6
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
anaconda-anon-usage	0.4.4	0.4.4
archspec	0.2.3	0.2.3
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2024.3.11	2024.3.11
certifi	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4
conda	24.3.0	24.3.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	24.1.0	24.1.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	42.0.5	42.0.5

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Table 251 – continued from previous page

Package Name	osx-arm64	osx-64
distro	1.8.0	1.8.0
expat	2.5.0	2.5.0
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.33	1.33
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.5.0	8.5.0
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.8	1.5.8
libmambapy	1.5.8	1.5.8
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.0.2	2.0.2
ncurses	6.4	6.4
openssl	3.0.13	3.0.13
packaging	23.2	23.2
pcre2	10.42	10.42
pip	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.2	3.12.2
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.2.2	68.2.2
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2024a	2024a
urllib3	2.1.0	2.1.0
wheel	0.41.2	0.41.2
xz	5.4.6	5.4.6

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Table 251 – continued from previous page

Package Name	osx-arm64	osx-64
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
anaconda-anon-usage	0.4.4
archspec	0.2.3
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2024.3.11
certifi	2024.2.2
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	24.3.0
conda-content-trust	0.2.0
conda-libmamba-solver	24.1.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	42.0.5
distro	1.8.0
expat	2.5.0
fmt	9.1.0
idna	3.4
jsonpatch	1.33
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.5.0
libffi	3.4.4
libiconv	1.16
libmamba	1.5.8
libmambapy	1.5.8
libsolv	0.7.24
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.0.2
openssl	3.0.13
packaging	23.2
pcre2	10.42
pip	23.3.1
platformdirs	3.10.0
pluggy	1.0.0

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Table 252 – continued from previous page

Package Name	win-64
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6
pycparser	2.21
pysocks	1.7.1
python	3.12.2
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.2.2
sqlite	3.41.2
tk	8.6.12
tqdm	4.65.0
truststore	0.8.0
tzdata	2024a
urllib3	2.1.0
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0
xz	5.4.6
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 24.1.2-0 (Feb 27, 2024)

Available Python versions: 3.12.1, 3.11.7, 3.10.13, 3.9.18

User-facing Changes

- Conda has been updated to v24.1.2.
- The default location of the macOS `.pkg` installers is now `/opt`.

Bug Fixes

- macOS `.pkg` installers now install into the `/opt` directory to circumvent an issue with install locations causing installations to fail. The user will be prompted for authorization when using the new default path. The macOS `.sh` installers remain unchanged.

Other Announcements

- Python 3.12 is now supported as of this release.
- Python 3.8 is no longer supported as of this release.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
archspec	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12
certifi	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama			0.4.6			0.4.6
conda	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						0.1.1
cryptography	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
expat	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0	2.5.0
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.4	3.4	3.3	3.4	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0	8.5.0
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			

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Table 253 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
libiconv				1.16	1.16	1.16
libmamba	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13	3.0.13
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.12.1	3.12.1	3.12.1	3.12.1	3.12.1	3.12.1
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.63.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023d	2023d	2023d	2023d	2023d	2023d
urllib3	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
vc						14.2
vs2015_runtime						14.27.2
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						1.1.0
xz	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
archspec	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2023.12.12	2023.12.12	2023.12.12
certifi	2024.2.2	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
colorama			0.4.6
conda	24.1.2	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0
cryptography	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0
expat	2.5.0	2.5.0	2.5.0
fmt	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1
idna	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.5.0	8.5.0	8.5.0
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.0.2	2.0.2	2.0.2
ncurses	6.4	6.4	6.4
openssl	3.0.13	3.0.13	3.0.13
packaging	23.1	23.1	23.1

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Table 254 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
pcre2	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pysocks	1.7.1	1.7.1	1.7.1
python	3.12.1	3.12.1	3.12.1
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.63.0
truststore	0.8.0	0.8.0	0.8.0
tzdata	2023d	2023d	2023d
urllib3	2.1.0	2.1.0	2.1.0
wheel	0.41.2	0.41.2	0.41.2
xz	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
archspec	0.2.1	0.2.1
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2023.12.12	2023.12.12
certifi	2024.2.2	2024.2.2
cffi	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4
conda	24.1.2	24.1.2
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	41.0.7	41.0.7
distro	1.8.0	1.8.0
expat	2.5.0	2.5.0

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Table 255 – continued from previous page

Package Name	osx-arm64	osx-64
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.5.0	8.5.0
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.0.2	2.0.2
ncurses	6.4	6.4
openssl	3.0.13	3.0.13
packaging	23.1	23.1
pcre2	10.42	10.42
pip	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pysocks	1.7.1	1.7.1
python	3.12.1	3.12.1
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.2.2	68.2.2
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2023d	2023d
urllib3	2.1.0	2.1.0
wheel	0.41.2	0.41.2
xz	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13

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Table 255 – continued from previous page

Package Name	osx-arm64	osx-64
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
archspec	0.2.1
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2023.12.12
certifi	2024.2.2
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	24.1.2
conda-content-trust	0.2.0
conda-libmamba-solver	23.12.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	41.0.7
distro	1.8.0
expat	2.5.0
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.5.0
libffi	3.4.4
libiconv	1.16
libmamba	1.5.3
libmambapy	1.5.3
libsolv	0.7.24
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.0.2
openssl	3.0.13
packaging	23.1
pcre2	10.42
pip	23.3.1
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6

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Package Name	win-64
pycparser	2.21
pysocks	1.7.1
python	3.12.1
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.2.2
sqlite	3.41.2
tk	8.6.12
tqdm	4.65.0
truststore	0.8.0
tzdata	2023d
urllib3	2.1.0
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0
xz	5.4.5
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.11.0-2 (Dec 20, 2023)

Available Python versions: 3.11.5, 3.10.13, 3.9.18, 3.8.18

User-Facing Changes

The `conda-standalone` package in the installer was rebuilt using `pyinstaller 5.13.2`.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
archspec	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8

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Table 257 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12.12	2023.12
certifi	2023.11.17	2023.11.17	2023.11.17	2023.11.17	2023.11.17	2023.11
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						0.4.6
conda	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						0.1.1
cryptography	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.4	3.4	3.3	3.4	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0
libcxx				14.0.6	14.0.6	
libedit	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	3.1.20230828	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1

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Table 257 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18
vc						14.2
vs2015_runtime						14.27.2
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						1.1.0
xz	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
archspec	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2023.12.12	2023.12.12	2023.12.12
certifi	2023.11.17	2023.11.17	2023.11.17
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
conda	23.11.0	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0

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Table 258 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
cryptography	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0
fmt	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1
idna	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0
libedit	3.1.20230828	3.1.20230828	3.1.20230828
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.0.1	2.0.1	2.0.1
ncurses	6.4	6.4	6.4
openssl	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1
pcre2	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0

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Table 258 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
truststore	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c
urllib3	1.26.18	1.26.18	1.26.18
wheel	0.41.2	0.41.2	0.41.2
xz	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
archspec	0.2.1	0.2.1
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2023.12.12	2023.12.12
certifi	2023.11.17	2023.11.17
cffi	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4
conda	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	41.0.7	41.0.7
distro	1.8.0	1.8.0
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.4.0	8.4.0
libcxx	14.0.6	14.0.6
libedit	3.1.20230828	3.1.20230828
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4

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Table 259 – continued from previous page

Package Name	osx-arm64	osx-64
lz4-c	1.9.4	1.9.4
menuinst	2.0.1	2.0.1
ncurses	6.4	6.4
openssl	3.0.12	3.0.12
packaging	23.1	23.1
pcre2	10.42	10.42
pip	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyopenssl	23.2.0	23.2.0
pysocks	1.7.1	1.7.1
python	3.11.5	3.11.5
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.2.2	68.2.2
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2023c	2023c
urllib3	1.26.18	1.26.18
wheel	0.41.2	0.41.2
xz	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
archspec	0.2.1
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2023.12.12
certifi	2023.11.17
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.11.0

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Package Name	win-64
conda-content-trust	0.2.0
conda-libmamba-solver	23.12.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	41.0.7
distro	1.8.0
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.4.0
libffi	3.4.4
libiconv	1.16
libmamba	1.5.3
libmambapy	1.5.3
libsolv	0.7.24
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.0.1
openssl	3.0.12
packaging	23.1
pcre2	10.42
pip	23.3.1
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6
pycparser	2.21
pyopenssl	23.2.0
pysocks	1.7.1
python	3.11.5
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.2.2
sqlite	3.41.2
tk	8.6.12
tqdm	4.65.0
truststore	0.8.0
tzdata	2023c
urllib3	1.26.18
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0

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Table 260 – continued from previous page

Package Name	win-64
xz	5.4.5
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.11.0-1 (Dec 18, 2023)

Available Python versions: 3.11.5, 3.10.13, 3.9.18, 3.8.18

User-Facing Changes

- Conda has been updated to v23.11.0
- Conda-libmamba-solver has been updated to v23.12.0
- Menuinst has been updated to v2.0.1 and is included for all platforms
- A warning has been added for RaspberryPi users on linux-aarch64 that Anaconda packages may be incompatible.

Known Issues

- Windows Start Menu entries may not always be removed during the uninstallation process. A fix is planned for v24.1.0. A possible workaround is to install any package into the base environment using conda install before uninstalling Miniconda.

Other Announcements

- Support for python 3.8 will end with this release.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
_libgcc_mutex	0.1	0.1	0.1			
_openmp_mutex	5.1	5.1	5.1			
archspec	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08

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Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
certifi	2023.11.17	2023.11.17	2023.11.17	2023.11.17	2023.11.17	2023.11
cffi	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						0.4.6
conda	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						0.1.1
cryptography	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0	1.8.0
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	
idna	3.4	3.4	3.3	3.4	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-s390x			2.38			
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0
libcxx				14.0.6	14.0.6	
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	
libev	4.33	4.33	4.33	4.33	4.33	
libffi	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0			
libgomp	11.2.0	11.2.0	11.2.0			
libiconv				1.16	1.16	1.16
libmamba	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0			
libuuid	1.41.5	1.41.5	1.41.5			
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1	2.0.1
ncurses	6.4	6.4	6.4	6.4	6.4	
openssl	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						0.0.1
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6

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Table 261 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x	osx-arm64	osx-64	win-64
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5
python.app				3	3	
readline	8.2	8.2	8.2	8.2	8.2	
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18
vc						14.2
vs2015_runtime						14.27.2
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						1.1.0
xz	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-s390x
_libgcc_mutex	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1
archspec	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22	2023.08.22
certifi	2023.11.17	2023.11.17	2023.11.17
cffi	1.16.0	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4	2.0.4
conda	23.11.0	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0
cryptography	41.0.7	41.0.7	41.0.7
distro	1.8.0	1.8.0	1.8.0

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Table 262 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
fmt	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1
idna	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38		
ld_impl_linux-aarch64		2.38	
ld_impl_linux-s390x			2.38
libarchive	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0
libedit	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0
libmamba	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4
menuinst	2.0.1	2.0.1	2.0.1
ncurses	6.4	6.4	6.4
openssl	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1
pcre2	10.42	10.42	10.42
pip	23.3.1	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0	3.10.0
pluggy	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4
pycosat	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5
readline	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21
setuptools	68.2.2	68.2.2	68.2.2
sqlite	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c

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Table 262 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-s390x
urllib3	1.26.18	1.26.18	1.26.18
wheel	0.41.2	0.41.2	0.41.2
xz	5.4.5	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
archspec	0.2.1	0.2.1
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22
certifi	2023.11.17	2023.11.17
cffi	1.16.0	1.16.0
charset-normalizer	2.0.4	2.0.4
conda	23.11.0	23.11.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	23.12.0	23.12.0
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	41.0.7	41.0.7
distro	1.8.0	1.8.0
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.4.0	8.4.0
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
menuinst	2.0.1	2.0.1

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Table 263 – continued from previous page

Package Name	osx-arm64	osx-64
ncurses	6.4	6.4
openssl	3.0.12	3.0.12
packaging	23.1	23.1
pcre2	10.42	10.42
pip	23.3.1	23.3.1
platformdirs	3.10.0	3.10.0
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyopenssl	23.2.0	23.2.0
pysocks	1.7.1	1.7.1
python	3.11.5	3.11.5
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.2.2	68.2.2
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2023c	2023c
urllib3	1.26.18	1.26.18
wheel	0.41.2	0.41.2
xz	5.4.5	5.4.5
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
archspec	0.2.1
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2023.08.22
certifi	2023.11.17
cffi	1.16.0
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.11.0
conda-content-trust	0.2.0
conda-libmamba-solver	23.12.0

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Table 264 – continued from previous page

Package Name	win-64
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	41.0.7
distro	1.8.0
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.4.0
libffi	3.4.4
libiconv	1.16
libmamba	1.5.3
libmambapy	1.5.3
libsolv	0.7.24
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	2.0.1
openssl	3.0.12
packaging	23.1
pcre2	10.42
pip	23.3.1
platformdirs	3.10.0
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6
pycparser	2.21
pyopenssl	23.2.0
pysocks	1.7.1
python	3.11.5
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.2.2
sqlite	3.41.2
tk	8.6.12
tqdm	4.65.0
truststore	0.8.0
tzdata	2023c
urllib3	1.26.18
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0
xz	5.4.5
yaml-cpp	0.8.0

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Table 264 – continued from previous page

Package Name	win-64
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.10.0-1 (Nov 16, 2023)

Available Python versions: 3.11.5, 3.10.13, 3.9.18, 3.8.18

User-Facing Changes

- Conda has been updated to v23.10.0
- The default solver has been changed to conda-libmamba-solver

Known Issues

- Windows Start Menu entries may not always be removed during the uninstallation process. A fix is planned for v24.1.0. A possible workaround is to install any package into the base environment using `conda install` before uninstalling Miniconda.

Other Announcements

- Support for PowerPC will end with this release.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
archspec	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.0
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						
conda	23.10.0	23.10.0	23.10.0	23.10.0	23.10.0	23.10.0

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Table 265 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.11.1	23.11.1	23.11.1	23.11.1	23.11.1	23.11.1
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						
cryptography	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	73.1
idna	3.4	3.4	3.4	3.3	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0	8.4.0
libcxx					14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
libmamba	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst						
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
openssl	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.3	23.3	23.3	23.3	23.3	23.3
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5
python.app					3	3
readline	8.2	8.2	8.2	8.2	8.2	8.2

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Table 265 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18	1.26.18
vc						
vs2015_runtime						
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
archspec	0.2.1	0.2.1	0.2.1	0.2.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9	1.0.9	1.0.9
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
conda	23.10.0	23.10.0	23.10.0	23.10.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.11.1	23.11.1	23.11.1	23.11.1
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0
cryptography	41.0.3	41.0.3	41.0.3	41.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1
idna	3.4	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38			

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Table 266 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.4.0	8.4.0	8.4.0	8.4.0
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
libmamba	1.5.3	1.5.3	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0	1.57.0	1.57.0
libsolv	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
ncurses	6.4	6.4	6.4	6.4
openssl	3.0.12	3.0.12	3.0.12	3.0.12
packaging	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42
pip	23.3	23.3	23.3	23.3
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5
readline	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.0.0	68.0.0	68.0.0	68.0.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c
urllib3	1.26.18	1.26.18	1.26.18	1.26.18
wheel	0.41.2	0.41.2	0.41.2	0.41.2
xz	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.8.0	0.8.0	0.8.0	0.8.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
archspec	0.2.1	0.2.1
boltons	23.0.0	23.0.0
brotli-python	1.0.9	1.0.9
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22
certifi	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4
conda	23.10.0	23.10.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	23.11.1	23.11.1
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	41.0.3	41.0.3
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.4.0	8.4.0
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.3	1.5.3
libmambapy	1.5.3	1.5.3
libnghttp2	1.57.0	1.57.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
ncurses	6.4	6.4
openssl	3.0.12	3.0.12
packaging	23.1	23.1
pcre2	10.42	10.42
pip	23.3	23.3
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyopenssl	23.2.0	23.2.0
pysocks	1.7.1	1.7.1
python	3.11.5	3.11.5
python.app	3	3
readline	8.2	8.2

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Table 267 – continued from previous page

Package Name	osx-arm64	osx-64
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.0.0	68.0.0
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2023c	2023c
urllib3	1.26.18	1.26.18
wheel	0.41.2	0.41.2
xz	5.4.2	5.4.2
yaml-cpp	0.8.0	0.8.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
archspec	0.2.1
boltons	23.0.0
brotli-python	1.0.9
bzip2	1.0.8
ca-certificates	2023.08.22
certifi	2023.7.22
cffi	1.15.1
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.10.0
conda-content-trust	0.2.0
conda-libmamba-solver	23.11.1
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	41.0.3
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.1.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.3
libmambapy	1.5.3
libsolv	0.7.24

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Table 268 – continued from previous page

Package Name	win-64
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	1.4.19
openssl	3.0.12
packaging	23.1
pcre2	10.42
pip	23.3
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6
pycparser	2.21
pyopenssl	23.2.0
pysocks	1.7.1
python	3.11.5
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.0.0
sqlite	3.41.2
tk	8.6.12
tqdm	4.65.0
truststore	0.8.0
tzdata	2023c
urllib3	1.26.18
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0
xz	5.4.2
yaml-cpp	0.8.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.9.0-0 (Oct 19, 2023)

Available Python versions: 3.11.5, 3.10.13, 3.9.18, 3.8.18

User-Facing Changes

- Conda has been updated to v23.9.0.
- Python versions 3.11.5, 3.10.13, 3.9.18, 3.8.18 — all of which patch CVE-2023-40217.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.08.22	2023.0
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7.22	2023.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						
conda	23.9.0	23.9.0	23.9.0	23.9.0	23.9.0	23.9.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.9.1	23.9.1	23.9.1	23.9.1	23.9.1	23.9.1
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0	0.9.0
console_shortcut_miniconda						
cryptography	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3	41.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1	73.1	73.1
idna	3.4	3.4	3.4	3.3	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1	8.2.1
libcxx					14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
libmamba	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libmambapy	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libxml2	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst						
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
openssl	3.0.11	3.0.11	3.0.11	3.0.11	3.0.11	3.0.11
packaging	23.1	23.1	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42	10.42	10.42
pip	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1	23.2.1
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5	3.11.5
python.app					3	3
readline	8.2	8.2	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0	68.0.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
vc						
vs2015_runtime						
wheel	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2	0.41.2
win_inet_pton						
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.1	1.19.1	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22	2023.08.22	2023.08.22
certifi	2023.7.22	2023.7.22	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
conda	23.9.0	23.9.0	23.9.0	23.9.0
conda-content-trust	0.2.0	0.2.0	0.2.0	0.2.0
conda-libmamba-solver	23.9.1	23.9.1	23.9.1	23.9.1
conda-package-handling	2.2.0	2.2.0	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0	0.9.0	0.9.0
cryptography	41.0.3	41.0.3	41.0.3	41.0.3
fmt	9.1.0	9.1.0	9.1.0	9.1.0
icu	73.1	73.1	73.1	73.1
idna	3.4	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.2.1	8.2.1	8.2.1	8.2.1
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
libmamba	1.5.1	1.5.1	1.5.1	1.5.1
libmambapy	1.5.1	1.5.1	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.24	0.7.24	0.7.24	0.7.24
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libxml2	2.10.4	2.10.4	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
ncurses	6.4	6.4	6.4	6.4
openssl	3.0.11	3.0.11	3.0.11	3.0.11
packaging	23.1	23.1	23.1	23.1
pcre2	10.42	10.42	10.42	10.42
pip	23.2.1	23.2.1	23.2.1	23.2.1
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4	4

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pycosat	0.6.6	0.6.6	0.6.6	0.6.6
pycparser	2.21	2.21	2.21	2.21
pyopenssl	23.2.0	23.2.0	23.2.0	23.2.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.5	3.11.5	3.11.5	3.11.5
readline	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.31.0	2.31.0	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	68.0.0	68.0.0	68.0.0	68.0.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
truststore	0.8.0	0.8.0	0.8.0	0.8.0
tzdata	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
wheel	0.41.2	0.41.2	0.41.2	0.41.2
xz	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
boltons	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0
bzip2	1.0.8	1.0.8
c-ares	1.19.1	1.19.1
ca-certificates	2023.08.22	2023.08.22
certifi	2023.7.22	2023.7.22
cffi	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4
conda	23.9.0	23.9.0
conda-content-trust	0.2.0	0.2.0
conda-libmamba-solver	23.9.1	23.9.1
conda-package-handling	2.2.0	2.2.0
conda-package-streaming	0.9.0	0.9.0
cryptography	41.0.3	41.0.3
fmt	9.1.0	9.1.0
icu	73.1	73.1
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2

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Package Name	osx-arm64	osx-64
libcurl	8.2.1	8.2.1
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.5.1	1.5.1
libmambapy	1.5.1	1.5.1
libnghttp2	1.52.0	1.52.0
libsolv	0.7.24	0.7.24
libssh2	1.10.0	1.10.0
libxml2	2.10.4	2.10.4
lz4-c	1.9.4	1.9.4
ncurses	6.4	6.4
openssl	3.0.11	3.0.11
packaging	23.1	23.1
pcre2	10.42	10.42
pip	23.2.1	23.2.1
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.6	0.6.6
pycparser	2.21	2.21
pyopenssl	23.2.0	23.2.0
pysocks	1.7.1	1.7.1
python	3.11.5	3.11.5
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.31.0	2.31.0
ruamel.yaml	0.17.21	0.17.21
setuptools	68.0.0	68.0.0
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
tqdm	4.65.0	4.65.0
truststore	0.8.0	0.8.0
tzdata	2023c	2023c
urllib3	1.26.16	1.26.16
wheel	0.41.2	0.41.2
xz	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
boltons	23.0.0
brotlipy	0.7.0
bzip2	1.0.8
ca-certificates	2023.08.22
certifi	2023.7.22
cffi	1.15.1
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.9.0
conda-content-trust	0.2.0
conda-libmamba-solver	23.9.1
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
console_shortcut_miniconda	0.1.1
cryptography	41.0.3
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.1.1
libffi	3.4.4
libiconv	1.16
libmamba	1.5.1
libmambapy	1.5.1
libsolv	0.7.24
libssh2	1.10.0
libxml2	2.10.4
lz4-c	1.9.4
menuinst	1.4.19
openssl	3.0.11
packaging	23.1
pcre2	10.42
pip	23.2.1
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.6
pycparser	2.21
pyopenssl	23.2.0
pysocks	1.7.1
python	3.11.5
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.31.0
ruamel.yaml	0.17.21
setuptools	68.0.0
sqlite	3.41.2
tk	8.6.12

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Package Name	win-64
tqdm	4.65.0
truststore	0.8.0
tzdata	2023c
urllib3	1.26.16
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.41.2
win_inet_pton	1.1.0
xz	5.4.2
yaml-cpp	0.7.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.5.2-0 (Jul 13, 2023)

Available Python versions: 3.11.4, 3.10.12, 3.9.17, 3.8.17

User-Facing Changes

- Conda has been updated to v23.5.2 (conda issue 12836).

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.0
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						
conda	23.5.2	23.5.2	23.5.2	23.5.2	23.5.2	23.5.2
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0

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Table 273 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
console_shortcut_miniconda						
cryptography	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libxml2	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst						
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37	10.37	10.37
pip	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4
python.app					3	3
readline	8.2	8.2	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
setuptools	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
vc						
vs2015_runtime						
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
win_inet_pton						
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
conda	23.5.2	23.5.2	23.5.2	23.5.2
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0
cryptography	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
libarchive	3.6.2	3.6.2	3.6.2	3.6.2

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Table 274 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
libmamba	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libxml2	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
ncurses	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37
pip	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4	4
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4
readline	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
wheel	0.38.4	0.38.4	0.38.4	0.38.4
xz	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
boltons	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0
bzip2	1.0.8	1.0.8
c-ares	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4
conda	23.5.2	23.5.2
conda-content-trust	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0
cryptography	39.0.1	39.0.1
fmt	9.1.0	9.1.0
icu	68.1	58.2
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0
libsolv	0.7.22	0.7.22
libssh2	1.10.0	1.10.0
libxml2	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4
ncurses	6.4	6.4
openssl	3.0.9	3.0.9
packaging	23.0	23.0
pcre2	10.37	10.37
pip	23.1.2	23.1.2
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyopenssl	23.0.0	23.0.0
pysocks	1.7.1	1.7.1
python	3.11.4	3.11.4
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4

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Package Name	osx-arm64	osx-64
reproc-cpp	14.2.4	14.2.4
requests	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21
setuptools	67.8.0	67.8.0
six	1.16.0	1.16.0
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
toolz	0.12.0	0.12.0
tqdm	4.65.0	4.65.0
tzdata	2023c	2023c
urllib3	1.26.16	1.26.16
wheel	0.38.4	0.38.4
xz	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
boltons	23.0.0
brotlipy	0.7.0
bzip2	1.0.8
ca-certificates	2023.05.30
certifi	2023.5.7
cffi	1.15.1
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.5.2
conda-content-trust	0.1.3
conda-libmamba-solver	23.5.0
conda-package-handling	2.1.0
conda-package-streaming	0.8.0
console_shortcut_miniconda	0.1.1
cryptography	39.0.1
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.1.1
libffi	3.4.4
libiconv	1.16
libmamba	1.4.1
libmambapy	1.4.1
libsolv	0.7.22
libssh2	1.10.0

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Package Name	win-64
libxml2	2.10.3
lz4-c	1.9.4
menuinst	1.4.19
openssl	3.0.9
packaging	23.0
pcre2	10.37
pip	23.1.2
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.4
pycparser	2.21
pyopenssl	23.0.0
pysocks	1.7.1
python	3.11.4
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.29.0
ruamel.yaml	0.17.21
setuptools	67.8.0
six	1.16.0
sqlite	3.41.2
tk	8.6.12
toolz	0.12.0
tqdm	4.65.0
tzdata	2023c
urllib3	1.26.16
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.38.4
win_inet_pton	1.1.0
xz	5.4.2
yaml-cpp	0.7.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.5.1-0 (Jul 12, 2023)

Available Python versions: 3.11.4, 3.10.12, 3.9.17, 3.8.17

User-Facing Changes

- Conda has been updated to v23.5.1 (conda issue 12873).

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.0
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						
conda	23.5.1	23.5.1	23.5.1	23.5.1	23.5.1	23.5.1
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
console_shortcut_miniconda						
cryptography	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libxml2	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst						
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37	10.37	10.37
pip	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4
python.app					3	3
readline	8.2	8.2	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
vc						
vs2015_runtime						
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
win_inet_pton						
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
conda	23.5.1	23.5.1	23.5.1	23.5.1
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0
cryptography	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
libmamba	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libxml2	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
ncurses	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37
pip	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4	4

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4
readline	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
wheel	0.38.4	0.38.4	0.38.4	0.38.4
xz	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
boltons	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0
bzip2	1.0.8	1.0.8
c-ares	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4
conda	23.5.1	23.5.1
conda-content-trust	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0
cryptography	39.0.1	39.0.1
fmt	9.1.0	9.1.0
icu	68.1	58.2
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1

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Package Name	osx-arm64	osx-64
libarchive	3.6.2	3.6.2
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0
libsolv	0.7.22	0.7.22
libssh2	1.10.0	1.10.0
libxml2	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4
ncurses	6.4	6.4
openssl	3.0.9	3.0.9
packaging	23.0	23.0
pcre2	10.37	10.37
pip	23.1.2	23.1.2
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyopenssl	23.0.0	23.0.0
pysocks	1.7.1	1.7.1
python	3.11.4	3.11.4
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21
setuptools	67.8.0	67.8.0
six	1.16.0	1.16.0
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
toolz	0.12.0	0.12.0
tqdm	4.65.0	4.65.0
tzdata	2023c	2023c
urllib3	1.26.16	1.26.16
wheel	0.38.4	0.38.4
xz	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
boltons	23.0.0
brotlipy	0.7.0
bzip2	1.0.8
ca-certificates	2023.05.30
certifi	2023.5.7
cffi	1.15.1
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.5.1
conda-content-trust	0.1.3
conda-libmamba-solver	23.5.0
conda-package-handling	2.1.0
conda-package-streaming	0.8.0
console_shortcut_miniconda	0.1.1
cryptography	39.0.1
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.1.1
libffi	3.4.4
libiconv	1.16
libmamba	1.4.1
libmambapy	1.4.1
libsolv	0.7.22
libssh2	1.10.0
libxml2	2.10.3
lz4-c	1.9.4
menuinst	1.4.19
openssl	3.0.9
packaging	23.0
pcre2	10.37
pip	23.1.2
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.4
pycparser	2.21
pyopenssl	23.0.0
pysocks	1.7.1
python	3.11.4
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.29.0
ruamel.yaml	0.17.21
setuptools	67.8.0
six	1.16.0
sqlite	3.41.2

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Package Name	win-64
tk	8.6.12
toolz	0.12.0
tqdm	4.65.0
tzdata	2023c
urllib3	1.26.16
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.38.4
win_inet_pton	1.1.0
xz	5.4.2
yaml-cpp	0.7.0
zlib	1.2.13
zstandard	0.19.0
zstd	1.5.5

Miniconda 23.5.0-3 (Jul 11, 2023)

Available Python versions: 3.11.4, 3.10.12, 3.9.17, 3.8.17

User-Facing Changes

- Conda has been updated to v23.5.0.
- OpenSSL has been updated to version 3.
- The default installer uses python-3.11.3.

Bug Fixes

- Address a bug that can cause accidental file deletion with Windows uninstallers (see our blog post). A security patch is available for older versions.

Known Issues

- The .pkg installers may skip the "Destination Select" page after accepting the license agreement. See our Anaconda installation instructions for details.

Included packages

Packages

All Platforms

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
_libgcc_mutex	0.1	0.1	0.1	0.1		
_openmp_mutex	5.1	5.1	5.1	5.1		
boltons	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.05.30	2023.0
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5.7	2023.5
cffi	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4	2.0.4
colorama						
conda	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0	0.8.0
console_shortcut_miniconda						
cryptography	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1	68.1	58.2
idna	3.4	3.4	3.4	3.3	3.4	3.4
jsonpatch	1.32	1.32	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38					
ld_impl_linux-aarch64		2.38				
ld_impl_linux-ppc64le			2.38			
ld_impl_linux-s390x				2.38		
libarchive	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1	8.1.1
libcxx					14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030	3.1.202
libev	4.33	4.33	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2	3.4.4	3.4.4
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libgomp	11.2.0	11.2.0	11.2.0	11.2.0		
libiconv					1.16	1.16
libmamba	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0		
libuuid	1.41.5	1.41.5	1.41.5	1.41.5		
libxml2	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4	1.9.4
menuinst						
ncurses	6.4	6.4	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37	10.37	10.37

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Table 281 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x	osx-arm64	osx-64
pip	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0	1.0.0
powershell_shortcut_miniconda						
pybind11-abi	4	4	4	4	4	4
pycosat	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4	3.11.4
python.app					3	3
readline	8.2	8.2	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2	3.41.2
tk	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16	1.26.16
vc						
vs2015_runtime						
wheel	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4	0.38.4
win_inet_pton						
xz	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5	1.5.5

Linux

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
_libgcc_mutex	0.1	0.1	0.1	0.1
_openmp_mutex	5.1	5.1	5.1	5.1
boltons	23.0.0	23.0.0	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0	0.7.0	0.7.0
bzip2	1.0.8	1.0.8	1.0.8	1.0.8
c-ares	1.19.0	1.19.0	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4	2.0.4	2.0.4
conda	23.5.0	23.5.0	23.5.0	23.5.0
conda-content-trust	0.1.3	0.1.3	0.1.3	0.1.3

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Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
conda-libmamba-solver	23.5.0	23.5.0	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0	0.8.0	0.8.0
cryptography	39.0.1	39.0.1	39.0.1	39.0.1
fmt	9.1.0	9.1.0	9.1.0	9.1.0
icu	58.2	68.1	58.2	68.1
idna	3.4	3.4	3.4	3.3
jsonpatch	1.32	1.32	1.32	1.32
jsonpointer	2.1	2.1	2.1	2.1
krb5	1.20.1	1.20.1	1.20.1	1.20.1
ld_impl_linux-64	2.38			
ld_impl_linux-aarch64		2.38		
ld_impl_linux-ppc64le			2.38	
ld_impl_linux-s390x				2.38
libarchive	3.6.2	3.6.2	3.6.2	3.6.2
libcurl	8.1.1	8.1.1	8.1.1	8.1.1
libedit	3.1.20221030	3.1.20221030	3.1.20221030	3.1.20221030
libev	4.33	4.33	4.33	4.33
libffi	3.4.4	3.4.4	3.4.4	3.4.2
libgcc-ng	11.2.0	11.2.0	11.2.0	11.2.0
libgomp	11.2.0	11.2.0	11.2.0	11.2.0
libmamba	1.4.1	1.4.1	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0	1.52.0	1.52.0
libsolv	0.7.22	0.7.22	0.7.22	0.7.22
libssh2	1.10.0	1.10.0	1.10.0	1.10.0
libstdcxx-ng	11.2.0	11.2.0	11.2.0	11.2.0
libuuid	1.41.5	1.41.5	1.41.5	1.41.5
libxml2	2.10.3	2.10.3	2.10.3	2.10.3
lz4-c	1.9.4	1.9.4	1.9.4	1.9.4
ncurses	6.4	6.4	6.4	6.4
openssl	3.0.9	3.0.9	3.0.9	3.0.9
packaging	23.0	23.0	23.0	23.0
pcre2	10.37	10.37	10.37	10.37
pip	23.1.2	23.1.2	23.1.2	23.1.2
pluggy	1.0.0	1.0.0	1.0.0	1.0.0
pybind11-abi	4	4	4	4
pycosat	0.6.4	0.6.4	0.6.4	0.6.4
pycparser	2.21	2.21	2.21	2.21
pyopenssl	23.0.0	23.0.0	23.0.0	23.0.0
pysocks	1.7.1	1.7.1	1.7.1	1.7.1
python	3.11.4	3.11.4	3.11.4	3.11.4
readline	8.2	8.2	8.2	8.2
reproc	14.2.4	14.2.4	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4	14.2.4	14.2.4
requests	2.29.0	2.29.0	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21	0.17.21	0.17.21
setuptools	67.8.0	67.8.0	67.8.0	67.8.0
six	1.16.0	1.16.0	1.16.0	1.16.0
sqlite	3.41.2	3.41.2	3.41.2	3.41.2

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Table 282 – continued from previous page

Package Name	linux-64	linux-aarch64	linux-ppc64le	linux-s390x
tk	8.6.12	8.6.12	8.6.12	8.6.12
toolz	0.12.0	0.12.0	0.12.0	0.12.0
tqdm	4.65.0	4.65.0	4.65.0	4.65.0
tzdata	2023c	2023c	2023c	2023c
urllib3	1.26.16	1.26.16	1.26.16	1.26.16
wheel	0.38.4	0.38.4	0.38.4	0.38.4
xz	5.4.2	5.4.2	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0	0.7.0	0.7.0
zlib	1.2.13	1.2.13	1.2.13	1.2.13
zstandard	0.19.0	0.19.0	0.19.0	0.19.0
zstd	1.5.5	1.5.5	1.5.5	1.5.5

macOS

Package Name	osx-arm64	osx-64
boltons	23.0.0	23.0.0
brotlipy	0.7.0	0.7.0
bzip2	1.0.8	1.0.8
c-ares	1.19.0	1.19.0
ca-certificates	2023.05.30	2023.05.30
certifi	2023.5.7	2023.5.7
cffi	1.15.1	1.15.1
charset-normalizer	2.0.4	2.0.4
conda	23.5.0	23.5.0
conda-content-trust	0.1.3	0.1.3
conda-libmamba-solver	23.5.0	23.5.0
conda-package-handling	2.1.0	2.1.0
conda-package-streaming	0.8.0	0.8.0
cryptography	39.0.1	39.0.1
fmt	9.1.0	9.1.0
icu	68.1	58.2
idna	3.4	3.4
jsonpatch	1.32	1.32
jsonpointer	2.1	2.1
krb5	1.20.1	1.20.1
libarchive	3.6.2	3.6.2
libcurl	8.1.1	8.1.1
libcxx	14.0.6	14.0.6
libedit	3.1.20221030	3.1.20221030
libev	4.33	4.33
libffi	3.4.4	3.4.4
libiconv	1.16	1.16
libmamba	1.4.1	1.4.1
libmambapy	1.4.1	1.4.1
libnghttp2	1.52.0	1.52.0
libsolv	0.7.22	0.7.22
libssh2	1.10.0	1.10.0
libxml2	2.10.3	2.10.3

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Package Name	osx-arm64	osx-64
lz4-c	1.9.4	1.9.4
ncurses	6.4	6.4
openssl	3.0.9	3.0.9
packaging	23.0	23.0
pcre2	10.37	10.37
pip	23.1.2	23.1.2
pluggy	1.0.0	1.0.0
pybind11-abi	4	4
pycosat	0.6.4	0.6.4
pycparser	2.21	2.21
pyopenssl	23.0.0	23.0.0
pysocks	1.7.1	1.7.1
python	3.11.4	3.11.4
python.app	3	3
readline	8.2	8.2
reproc	14.2.4	14.2.4
reproc-cpp	14.2.4	14.2.4
requests	2.29.0	2.29.0
ruamel.yaml	0.17.21	0.17.21
setuptools	67.8.0	67.8.0
six	1.16.0	1.16.0
sqlite	3.41.2	3.41.2
tk	8.6.12	8.6.12
toolz	0.12.0	0.12.0
tqdm	4.65.0	4.65.0
tzdata	2023c	2023c
urllib3	1.26.16	1.26.16
wheel	0.38.4	0.38.4
xz	5.4.2	5.4.2
yaml-cpp	0.7.0	0.7.0
zlib	1.2.13	1.2.13
zstandard	0.19.0	0.19.0
zstd	1.5.5	1.5.5

Windows

Package Name	win-64
boltons	23.0.0
brotlipy	0.7.0
bzip2	1.0.8
ca-certificates	2023.05.30
certifi	2023.5.7
cffi	1.15.1
charset-normalizer	2.0.4
colorama	0.4.6
conda	23.5.0
conda-content-trust	0.1.3
conda-libmamba-solver	23.5.0

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Package Name	win-64
conda-package-handling	2.1.0
conda-package-streaming	0.8.0
console_shortcut_miniconda	0.1.1
cryptography	39.0.1
fmt	9.1.0
idna	3.4
jsonpatch	1.32
jsonpointer	2.1
libarchive	3.6.2
libcurl	8.1.1
libffi	3.4.4
libiconv	1.16
libmamba	1.4.1
libmambapy	1.4.1
libsolv	0.7.22
libssh2	1.10.0
libxml2	2.10.3
lz4-c	1.9.4
menuinst	1.4.19
openssl	3.0.9
packaging	23.0
pcre2	10.37
pip	23.1.2
pluggy	1.0.0
powershell_shortcut_miniconda	0.0.1
pybind11-abi	4
pycosat	0.6.4
pycparser	2.21
pyopenssl	23.0.0
pysocks	1.7.1
python	3.11.4
reproc	14.2.4
reproc-cpp	14.2.4
requests	2.29.0
ruamel.yaml	0.17.21
setuptools	67.8.0
six	1.16.0
sqlite	3.41.2
tk	8.6.12
toolz	0.12.0
tqdm	4.65.0
tzdata	2023c
urllib3	1.26.16
vc	14.2
vs2015_runtime	14.27.29016
wheel	0.38.4
win_inet_pton	1.1.0
xz	5.4.2
yaml-cpp	0.7.0
zlib	1.2.13

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Package Name	win-64
zstandard	0.19.0
zstd	1.5.5

Uninstalling Miniconda

To uninstall your Miniconda installation:

Windows

1. (Optional) If you have created any environments outside your `anaconda3` directory, you can manually delete them to increase available disc space on your computer. This step must be performed before uninstalling Miniconda.

Uninstall environments outside the `anaconda3` directory

1. Open Anaconda Prompt.
2. View a list of all your environments by running the following command:

```
conda info --envs
```

   If you have any environments in a directory other than `anaconda3`, you will need to uninstall the directory that contains the environments. Uninstalling the directory with the following command will both delete the environment files and deregister the environments.

3. Open your preferred shell.
4. Uninstall the directory by running the following command:

```
# Replace <YOUR_USERNAME> with your Windows username
# Replace <PATH_TO_ENV_DIRECTORY> with the path to the directory␣
↪that contains the environments
C:\Users\<YOUR_USERNAME>\miniconda3\_conda constructor uninstall -
↪-prefix <PATH_TO_ENV_DIRECTORY>
```

2. Search for "Control Panel" in the Windows search box and select the Control Panel app.
3. Click **Uninstall a program** under **Programs**.
4. Select Miniconda from the list of programs.
5. Click **Uninstall**.
6. Follow the on-screen instructions to complete the uninstallation process.

Silent CLI uninstall

On Windows operating systems, you can silently uninstall Miniconda using either Command Prompt or PowerShell.

Command Prompt

Open a new Command Prompt window and run the following command:

```
start /wait .\miniconda3\Uninstall-Miniconda3.exe /S
```

As of Miniconda v24.11.1, you can also use additional arguments to remove other files from your system.

Optional uninstall arguments

/RemoveCaches=[0|1]
: Removes caches (e.g., package and index caches, etc.).

/RemoveConfigFiles=[none|user|system|all]
: Removes configuration files such as `.condarc` files. `user` removes the files inside the current user's home directory and `system` removes all files outside of that directory.

/RemoveUserData=[0|1]
: Removes user data, such as the `%USERPROFILE%/.conda` directory.

Caution: Using these arguments is *not* recommended if you have multiple conda installations.

The following command is an example of how the uninstall arguments could be used:

```
start /wait .\miniconda3\Uninstall-Miniconda3.exe /S /RemoveCaches=1 /
↪RemoveConfigFiles=user /RemoveUserData=1
```

PowerShell

Open a new PowerShell window and run the following command:

```
Start-Process -FilePath ".\miniconda3\Uninstall-Miniconda3.exe" -ArgumentList "/S" -Wait
```

As of Miniconda v24.11.1, you can also use additional arguments to remove other files from your system.

Optional uninstall arguments

/RemoveCaches=[0|1]
: Removes caches such package caches.

/RemoveConfigFiles=[none|user|system|all]
: Removes configuration files such as `.condarc` files. `user` removes the files inside the current user's home directory and `system` removes all files outside of that directory.

/RemoveUserData=[0|1]
: Removes user data, such as the `${env:USERPROFILE}/.conda` directory.

Caution: Using these arguments is *not* recommended if you have multiple conda installations.

The following command is an example of how the uninstall arguments could be used:

```
Start-Process -FilePath ".\miniconda3\Uninstall-Miniconda3.exe" -ArgumentList "/S /
↪RemoveCaches=1 /RemoveConfigFiles=user /RemoveUserData=1" -Wait
```

macOS/Linux

1. Open a new terminal application window.
2. (Optional) If you have created any environments outside your `anaconda3` directory, you can manually delete them to increase available disc space on your computer. This step must be performed before uninstalling Miniconda.

Uninstall environments outside the `anaconda3` directory

1. View a list of all your environments by running the following command:

   ```
   conda info --envs
   ```

   If you have any environments in a directory other than `anaconda3`, you will need to uninstall the directory that contains the environments. Uninstalling the directory with the following command will both delete the environment files and deregister the environments.

2. Uninstall the directory by running the following command:

   ```
   # Replace <PATH_TO_ENV_DIRECTORY> with the path to the directory␣
   ↪that contains the environments
   ~/miniconda3/_conda constructor uninstall --prefix <PATH_TO_ENV_
   ↪DIRECTORY>
   ```

3. Deactivate your `base` environment by running the following command:

   ```
   conda deactivate
   ```

   You should no longer see `(base)` in your terminal prompt.

4. As of Miniconda v24.11.1, an `uninstaller.sh` script is available to help you remove Miniconda from your system. Run the basic script to remove Miniconda and its shell initializations, or add arguments to remove additional user or system files. If your version does not have the uninstaller script, use the instructions under Manual uninstall.

   Note: If you have installed Miniconda into a system location, you must use `sudo -E` to run the uninstaller.

   For example, the `.pkg` installer for macOS installs Miniconda into a system location, `/opt/miniconda3`.

Basic uninstall

```
~/miniconda3/uninstall.sh
```

Basic system uninstall

```
sudo -E ~/opt/miniconda3/uninstall.sh
```

Advanced uninstall

Caution:

- Including additional uninstall arguments is optional. These arguments remove additional files from your system. Using these arguments is not recommended if you have multiple conda installations.
- If any files outside the installation directory are symlinks, it's possible that only the link will be removed, and not the underlying files, meaning you'll need to find and delete them manually.

Optional uninstall arguments

`--remove-caches`
: Removes caches (e.g., package and index caches, etc.).

`--remove-config-files {user,system,all}`
: Removes configuration files such as `.condarc` files. `user` removes the files inside the current user's home directory and `system` removes all files outside of that directory.

`--remove-user-data`
: Removes user data, such as the `~/.conda` directory.

The following command is an example of how the uninstall arguments could be used:

```
~/miniconda3/uninstall.sh --remove-caches --remove-config-files user --
↪remove-user-data
```

Manual uninstall

1. (Optional) Remove any conda initialization scripts from all your terminal shell profiles by running the following command:

   ```
   conda activate
   conda init --reverse --all
   ```

2. Remove your entire `miniconda3` directory with `rm -rf`. Depending on your installation, this directory will be in your root folder or in your opt folder.

> **Warning:** When paired with the `-r` (recursive) flag, the `f` (force) flag deletes all specified directories and the files within them without prompting you for confirmation. Double-check and verify that you have correctly specified the directories you intend to delete before running `rm -rf`, as this action can't be undone.

```
# The following are a few examples of how you might need to␣
↪delete your miniconda3 folder
rm -rf miniconda3
rm -rf ~/miniconda3
sudo rm -rf /opt/miniconda3
```

3. (Optional) Remove the hidden `.condarc` file and `.conda`, `.continuum`, and `.anaconda` directories from your home directory by running the following command:

> **Caution:** Consider keeping a backup of the `.condarc` file, especially if you have custom configurations for conda and are planning on reinstalling.

```
rm -rf ~/.condarc ~/.conda ~/.continuum ~/.anaconda
```

5. Close and reopen your terminal to refresh it. You should no longer see `(base)` in your terminal prompt.

Latest Miniconda installer links

To download the latest Miniconda installers for Python 3.12:

1. Go to anaconda.com/download.
2. Submit your email to register with Anaconda, if desired.
3. Click **Submit** to continue to the Download Now page.
4. Scroll down past the Anaconda Distribution installers.

For a list of Miniconda hashes and an archive of Miniconda versions, including installers for older versions of Python, see https://repo.anaconda.com/miniconda.

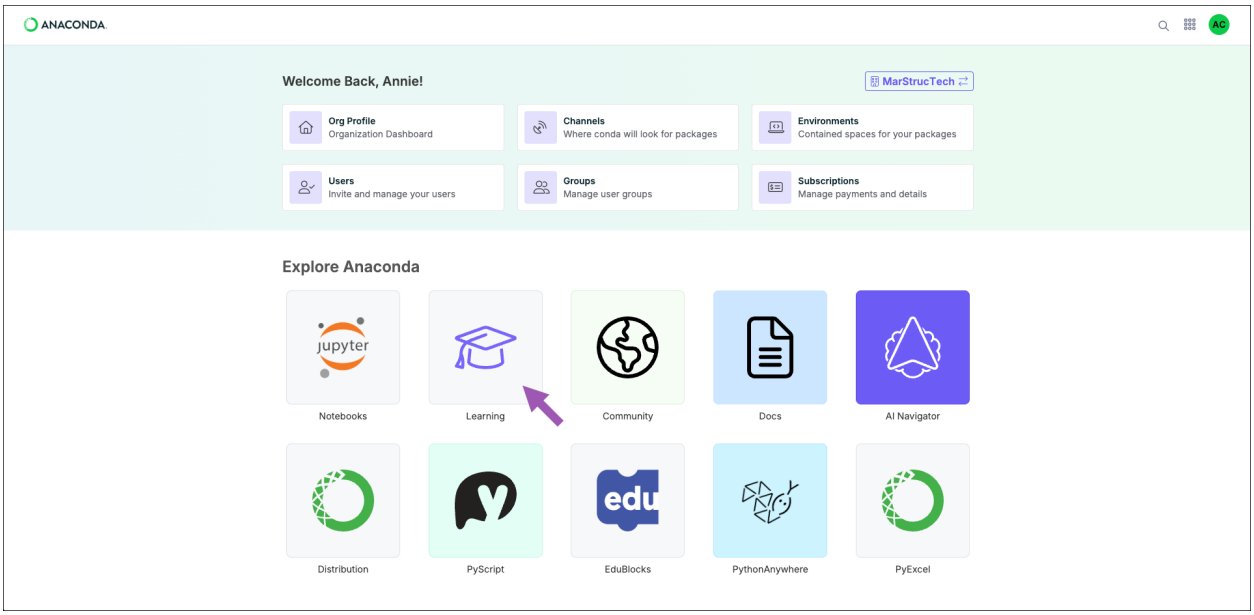
Quick command line install

See our new section on the *Installing Miniconda* page!

2.18.4 Anaconda Learning

Master the foundations of data science through structured, step-by-step courses. Code along with your course instructors, develop projects, and save your progress directly inside Anaconda Learning.

Check it out for yourself here or log in to Anaconda Cloud and select **Learning**:



Security practices for Anaconda Learning

- Make sure you use a highly secure password for your Anaconda Cloud login. Anaconda recommends using memorable but unguessable passwords of the kind dreamed up by Randall Munroe of XKCD. There's even a Python package to generate them. A good alternative is to use completely random passwords of at least 16 alphanumeric characters and to store them in a password manager like Keepass.
- Verify your email address to reset your Anaconda Cloud password if you forget it.
- Look out for phishing. Anaconda will never send you an email asking for your password. Also, check the address bar in your browser before typing in your password!
- Don't leave a device that's logged in to Anaconda Notebooks unattended in a public area.
- If working with sensitive information in a public place, use a privacy screen on your device to discourage strangers from viewing your screen.

2.18.5 Working with conda

Installing Anaconda Distribution or Miniconda gives you access to conda, Python, and thousands of other popular packages. Anaconda Distribution installs more than 300 of these packages automatically, while Miniconda is a more lightweight distribution that contains only conda, python, their dependencies, and a small number of other packages.

Which installer is right for you? See *Anaconda Distribution or Miniconda*

This section of the documentation covers instructions that work with either Anaconda Distribution or Miniconda installations, but if you need documentation specific to one installation or the other, click below:

Anaconda Distribution For documentation specific to Anaconda Distribution, including installation instructions and package lists

Anaconda Distribution

Miniconda For documentation specific to Miniconda, including installation instructions and installer hashes

Miniconda

What is conda?

Conda is a free, open-source software program for package and environment management originally developed by Anaconda. Today, conda is maintained by members of the open source community and operates independently from Anaconda, Inc. Anyone can contribute to conda, *including you*!

Anaconda's conda documentation is focused on using conda with Anaconda Distribution or Miniconda. Our documentation includes links to relevant resources in the official conda docs at docs.conda.io, which provide detailed information about conda commands and technical guides for using conda.

Note: While conda is free to use, use of Anaconda Distribution and Anaconda's *default channels* are subject to Anaconda's Terms of Service and may require a license. For details on Anaconda's Terms of Service, see our Terms of Service FAQ and our official Terms of Service.

Helpful conda links

conda cheatsheet Quick reference for basic conda commands, including environment and package management.

https://docs.conda.io/projects/conda/en/stable/user-guide/cheatsheet.html conda commands index Full index of conda commands, including all available options and arguments.

https://docs.conda.io/projects/conda/en/stable/commands/index.html conda governance policy The policies and procedures that manage the conda open source community.

https://github.com/conda/governance conda code of conduct The conda open source community's code of conduct.

https://github.com/conda/governance/blob/main/CODE_OF_CONDUCT.md

Environments

Environments in conda are self-contained, isolated spaces where you can install specific versions of software packages, including dependencies, libraries, and Python versions. This isolation helps avoid conflicts between package versions and ensures that your projects have the exact libraries and tools they need.

Why should I create a new environment?

There are several reasons you might want to create a new environment:

Isolation of dependencies - Environments isolate software and their dependencies from the rest of the software installed on your machine. This means you can have both Python 3.9 and Python 3.10 installed on your machine and use both versions without encountering issues.

Reproducibility - By creating an environment for each project, you can ensure that your code runs consistently across different machines. *Lock your environment* to ensure that it remains reproducible indefinitely, then *share the environment configuration* to allow others to replicate your setup.

Ease of management - Conda provides tools to easily create, manage, and delete environments. You can quickly *switch between environments*, making it simple to manage multiple projects with different requirements.

Testing and development - Environments are perfect for testing new packages or libraries without affecting your stable development setups. You can experiment freely and remove the environment if things don't work out, without impacting your other projects.

Why shouldn't I work in the base environment?

When first installing and using conda, you probably saw references to something called `base` or a "base environment". This environment is where conda itself is installed, and should only be used for installing anaconda, conda, and conda-related packages, such as `anaconda-client` or `conda-build`.

For your projects, however, Anaconda *strongly* recommends creating new environments to work in. This protects your base environment from breaking due to complex dependency conflicts and allows you to easily manage and reproduce your environment on other machines.

Working with environments

For convenience, the most common actions users take when managing environments are detailed here. For a full list of actions and more comprehensive guide, see Manage environments in the official conda documentation. Alternatively, follow along with our Getting started with conda environments tutorial on Anaconda Cloud.

Tip: If you prefer to create and manage your environments via our graphical interface, Navigator, see *Managing environments*.

Creating an environment

Create a conda environment by opening Anaconda Prompt (Terminal on macOS/Linux) and following the steps for your use case below:

Creating a new environment

The following command creates a new environment and downloads the specified packages and their dependencies:

```
# Replace <ENV_NAME> with a name for your environment
# Replace <PACKAGE> with your desired package
# Replace <VERSION> with your desired version (optional)
conda create --name <ENV_NAME> <PACKAGE>=<VERSION>
```

Example:

```
conda create --name myenv python=3.11 beautifulsoup4 docutils jinja2=3.1.4 wheel
```

Example version matching inputs

Version matching utilizes Matchspec Protocol. Below are some examples for specifying versions for packages when creating an environment. For more information, see MatchSpec in the official conda documentation. If you do not specify a package version, conda will attempt to install the latest version of the package from its available channels.

- `python=3.12.1` - Matches the package with the exact name and version specified.
- `python>=3.11` - Matches any version of the package that is greater than or equal to the version specified.
- `python<=3.12` - Matches any version of the package that is less than or equal to the version specified.

- `python>3.10,<3.12` - Matches any version of the package between the specified versions, but excludes the specified versions.
- `python>=3.10,<=3.12` - Matches any version of the package between the specified versions, including the specified versions.
- `python[version='3.12.*']` - Matches any version of the python package that starts with 3.12.

Creating an environment from a `.yml` file

If someone has *shared an environment* with you, or you have exported a `.yml` file to recreate your environment on a new machine, run the following command from the directory containing the `.yml` file:

```
conda env create --file environment.yml
```

Note: The first line of the file sets the environment's name. For more information, see Creating an environment file manually.

Activating an environment

Because environments are isolated spaces, you can only work with one at a time. Selecting an environment to work with is called activating it.

Activate an environment by running the following command:

```
# Replace <ENV_NAME> with the name of the environment you want to activate
conda activate <ENV_NAME>
```

Switching between environments

When you're ready to switch between projects, simply activate the environment of your other project. Activating a different environment will deactivate your current one.

1. (Optional) View a list of all your environments by running the following command:

   ```
   conda info --envs
   ```

2. To switch to a different environment, activate it by running the following command:

   ```
   # Replace <ENV_NAME> with the name of the environment you want to switch to
   conda activate <ENV_NAME>
   ```

Locking an environment

The most reliable way to ensure your project remains reproducible indefinitely is to "lock" its environment. Locking an environment creates a fully specified environment, one that has all packages used in the project and their dependencies configured to a specific version. This ensures that your project will be reproduced exactly as it was initially configured, because there will never be an unexpected update or change if new package dependencies are released.

Locking your project requires the `conda-project` package to be installed in the environment you want to lock. Install the package by running the following commands:

```
# Replace <ENV> with the environment you want to lock
conda activate <ENV>
conda install conda-project
```

If your project doesn't contain an `environment.yml` file, create one by running the following command:

```
conda-project init
```

You can then lock your project's environment by running the following command:

```
conda-project lock
```

Locking your project produces a `conda-lock.default.yml` file that you can export to share with others.

Sharing an environment

Sharing your environment with someone else allows them to use conda to *recreate your environment* on their machine.

To share an environment and its software packages, you must export your environment's configurations into a `.yml` file.

Caution: Simply copying your Anaconda or Miniconda files over to a new directory or another machine will not recreate the environment. You must export the environment as a whole.

Exporting the environment configuration `.yml` file

Warning: If you already have an environment configuration `.yml` file in your current directory, it will be overwritten during the export process.

1. Activate the environment you want to export by running the following command:

   ```
   # Replace <ENV_NAME> with the name of the environment you want exported
   conda activate <ENV_NAME>
   ```

2. Export the environment by running the following command:

   ```
   conda env export > environment.yml
   ```

   Note: This file handles both the environment's pip packages and conda packages.

3. Share the exported environment configuration `.yml` file with another user.

Deactivating an environment

It is best practice to deactivate your environment when you are finished working in it.

To deactivate your active environment, run the following command:

```
conda deactivate
```

Packages

Configuring a shared package cache

If you have your own installation of Anaconda or Miniconda on your system, you can improve the speed at which packages are installed or new environments are created and save disk space by setting up the configuration to use a shared package cache.

Normal installation sets a package cache relative to the install directory. This can be found with the following command listed under package cache:

`conda info`

The normal path to the package cache is:

Windows - C:\Users\username\Anaconda{2,3}\pkgs

macOS - ~/anaconda{2,3}

Linux - /home/username/anaconda{2,3}/pkgs

Each user has their own package cache so when a package is installed, the package is put into their own cache and not shared with anyone else.

The benefit of a shared package cache is that once a particular version of a package has already been downloaded by a user it will not be downloaded again and stored in a separate cache. This saves disk usage and speeds up the install as it does not need to download the package again.

Shared package cache setup

Create a directory on your system where the shared users have read and write access.

> **Warning:** If you are using the Free tier, take caution when sharing your directory. If you have paid for access to the premium repository, you can *enable signature verification* to include an additional layer of security to your packages. For more information on conda signature verification, see our blog Anaconda Content Trust: Conda Signature Verification.

Then, for each user who will have access, edit the .condarc file found in their home directory.

Windows - C:\Users\username\.condarc

macOS and Linux - /home/username/.condarc

Edit the .condarc with the following entry, specifying the full path to the shared directory:

```
pkgs_dirs:
    - /path/to/shared_directory
```

Verify the package cache by running `conda info` again.

Installing conda packages

A conda packages is a compressed tarball (`.tar.bz2`) or `.conda` file that contains everything needed to install a specific piece of software in a conda environment. This includes:

- The software/library itself and any required dependencies.
- Metadata about the package (version, author, and so on).
- Installation scripts and configuration information.
- Pre-compiled binary files for different operating systems and architectures.

You can use the conda package manager to access and install over 8,000 open-source data science and machine learning conda packages from Anaconda's public repository and thousands more community-developed packages published on Anaconda.org and conda-forge.

You can even build your own custom conda packages using the `conda-build` tool, then share them with others by uploading them to a public channel on Anaconda.org or conda-forge.

Note: It is possible to use conda alongside pip to build your conda environments. However, using pip packages in a conda environment comes with some limitations. For more information, see *Installing pip packages*.

This page includes common conda commands for interacting with conda packages. For more detailed information about managing packages, see the official conda documentation.

Open Anaconda Prompt (Terminal on macOS/Linux) and follow these instructions. You can also use *Anaconda Navigator* to install conda packages with just a few clicks, if you prefer using a graphical user interface.

Searching for conda packages

To use conda to search for a package:

```
# Replace <PACKAGE> with the name of the package you want to search for
conda search <PACKAGE>
```

By default, conda searches for packages in Anaconda's *default channels*.

To search a specific channel for a package:

```
# Replace <PACKAGE> with the name of the package you want to search for
# Replace <CHANNEL> with the URL or name of the channel you want to search, e.g., conda-
↪forge
conda search <CHANNEL>::<PACKAGE>
```

If you don't specify a full URL in the command, conda invokes the channel alias to complete the URL. By default, this is `https://conda.anaconda.org/<CHANNEL>`. You can change the channel alias to a different repository with `channel_alias`. See the official conda documentation for channel alias configuration details.

The official conda documentation also includes more information about specifying channels.

Installing conda packages

Use the `conda install` command to install packages into an environment. If no environment is specified in the command, conda installs the package in the working environment. Run `conda install --help` to see help information and a list of available options.

Note: For your projects, Anaconda strongly recommends creating a *separate conda environment* to work in, rather than installing your project packages in the base environment. This protects your base environment from breaking due to complex dependency conflicts and allows you to easily manage and reproduce your environment on other machines.

Single package

To install a conda package, run the following command:

```
# Replace <PACKAGE> with the name of the package you want to install
conda install <PACKAGE>
```

Multiple packages

To install multiple packages, list the packages separated by a space:

```
# Replace <PACKAGE> with the name of the package you want to install
conda install <PACKAGE> <PACKAGE> <PACKAGE>
```

Specify channel

To install from a specific channel:

```
# Replace <PACKAGE> with the name of the package you want to install
# Replace <CHANNEL> with the URL or name of the channel you want to install from
conda install <CHANNEL>::<PACKAGE>
```

For more information about specifying channels and setting channel aliases, see *Searching a specific channel* above.

Specify environment

To install a package in an environment other than your working environment:

```
# Replace <PACKAGE> with the name of the package you want to install
# Replace <ENVIRONMENT> with the name of the environment where you want to install the␣
↪package
conda install <PACKAGE> --name <ENVIRONMENT>
```

Specifying package versions

By default, when installing packages from the command line, conda retrieves the latest available versions from the repository channel. To define package versions, conda uses MatchSpec as its query language.

Here is an example command that installs NumPy version 2.2.2:

```
conda install numpy=2.2.2
```

You can also use wildcard characters and match ranges of packages with conda using MatchSpec. For more information, see the official conda documentation on match specifications.

Managing Python environments

When you attempt to install a package in an environment, conda checks to see which version of Python is installed in your current environment (or the environment specified by the install command), and only installs packages that are compatible with that version of Python.

If a package you're trying to install doesn't have a version that's compatible with the environment's Python version, you can create a new environment that uses a different version of Python. Conda treats Python the same as any other package, so it's easy to manage and update multiple installations.

To create a new environment and install a different version of Python:

```
# Replace <ENVIRONMENT> with the name of the new environment
# Replace <VERSION> with the specific version of Python you want to install
conda create --name <ENVIRONMENT> python=<VERSION>
```

See the official conda documentation for more information about managing Python.

Installing packages on a non-networked (air-gapped) computer

To directly install a conda package from your local computer:

```
# Replace <PACKAGE_PATH/PACKAGE> with the relative path to the package.
conda install <PACKAGE_PATH/PACKAGE>.conda
```

Conda installs packages into the `anaconda/pkgs` directory. Conda supports both `.conda` and `.tar.bz2` file types.

If conda cannot find the file, try using an absolute path name instead of a relative path name.

> **Caution:** Installing a package directly from a local file does not resolve its dependencies. If your installed package does not work, you might have missing dependencies that need to be resolved manually.

Installing pip packages

Most of the popular packages from the PyPI repository are available in either Anaconda's public repository, Anaconda.org, or conda-forge. However, you might need to use pip if a package or specific version is not available through conda channels.

Installing packages using pip modifies your conda environment, but conda isn't aware of these modifications. As a result, when conda later attempts to modify the environment, there's a high probability that dependency conflicts will arise between the conda-tracked packages and the untracked pip packages, which can lead to a broken environment.

Understanding conda and pip

Although some of the functionality of conda and pip overlap (namely, the ability to install Python packages), they were designed and should be used for different purposes. Pip is the Python Packaging Authority's recommended tool for installing packages from the Python Package Index, PyPI. Conda, on the other hand, is a cross-platform package and environment manager that installs and manages packages from the Anaconda public repository as well as from Anaconda.org.

Other key differences between conda and pip include:

	conda	pip
Package distribution format	Binaries	Wheels or source
Requires compilers?	No	Yes
Package types	Any (Python, R, C++, etc.)	Python only
Environment creation?	Yes, built in	No, requires virtualenv or venv
Dependency resolution?	Yes	No
Package sources	Anaconda repo, Anaconda.org	PyPI

Follow the guidance on this page when using pip in a conda environment to avoid dependency conflicts and broken environments.

Creating an `environment.yml` file manually

To create a stable environment that includes pip packages, Anaconda recommends writing an `environment.yml` file and then building an environment from that file. Although this method is more time consuming to set up, it offers several advantages:

- Control over package build order, versions, and channels
- Straightforward environment updates
- Better reproducibility and shareability via a `.yml` file

Writing an `environment.yml` file

The following is an example `environment.yml` file. When writing the file, be sure to add pip and its dependencies last, since conda builds environments in the order listed.

```
name: myenv # This will become the name of your environment
dependencies: # The list of packages to include in your environment
    - python=3.12 # You can specify versions
    - bokeh>=2.4.2
    - flask
    - pip # Install pip in your environment
    - pip: # Include pip dependencies last
        - Flask-Testing
```

The official conda documentation includes more information on creating environment files manually, as well as package match specifications.

Creating an environment from an `environment.yml` file

To create an environment from an `environment.yml` file, run the following command from the directory containing the file:

```
conda env create --file environment.yml
```

See the official conda documentation for details on creating an environment from a .yml file.

Updating an environment with an `environment.yml` file

If you ever need to add packages to your environment, make changes to package versions, or remove packages, update the `environment.yml` file, then rebuild the environment by running the following command from the directory containing the file:

```
conda env update --file environment.yml --prune
```

Note: The `--prune` option removes any orphaned packages from the environment. A package is considered orphaned if it meets both these criteria:

- It wasn't explicitly installed by the user.
- It isn't a dependency for any currently installed packages.

Using `pip install` in a conda environment

Because of conda's lack of awareness of environment updates made by pip, using pip in your environment must be the last action that will be performed when building the environment.

Caution: Do not run `pip install` in your base environment. Create a *separate conda environment* to isolate changes.

To build a conda environment that contains PyPI packages at the command line, complete the following steps:

1. Activate your target environment.
2. Install the conda packages first by running the following command:

```
# Replace <PACKAGE> with the conda packages you need to install, separated␣
↪by a space
# List the pip package last
conda install <PACKAGE> <PACKAGE> pip
```

Note: Both Anaconda and Miniconda include pip, but you must install it in your working environment to execute pip commands.

3. To install a PyPI package, run the following command:

```
# Replace <PACKAGE> with the name of the PyPI package you need to install
pip install <PACKAGE>
```

If you need to install additional conda packages after installing pip packages, create a new environment and reinstall the packages following the process outlined above.

For more information, see the official conda documentation on using pip with conda.

Using R language with Anaconda

With Anaconda (or Miniconda), you can install the R programming language and over 6,000 commonly used R packages for data science. You can also create and share your own custom R packages.

Note: When using conda to install R packages, add `r-` before the regular package name. For instance, to install rbokeh, use `conda install r-rbokeh`. To install rJava, use `conda install r-rjava`.

The R Essentials bundle contains approximately 200 of the most popular R packages for data science, including the IRKernel, dplyr, shiny, ggplot2, tidyr, caret, and nnet.

The version of the R interpreter installed into your R environments is based on the version of the `r-base` package.

Note: Run the commands in the following sections in Anaconda Prompt (Terminal on macOS/Linux).

Updating R packages

Caution: Exercise caution when using conda to update RStudio or other R packages to their latest versions. This might break your conda RStudio environment.

- Update all of the packages and their dependencies by running the following command:

```
conda update r-caret
```

- If a new version of a package is available in the R channel, update specific packages by running the following command:

```
conda update
```

Creating and sharing custom R bundles

Creating and sharing custom R bundles is similar to creating and sharing conda packages. In the following example, we will create a simple custom R bundle metapackage named "Custom-R-Bundle".

1. Create the metapackage "Custom-R-Bundle" that contains several popular programs and their dependencies by running the following command:

```
conda metapackage custom-r-bundle 0.1.0 --dependencies r-irkernel jupyter r-ggplot2␣
↪r-dplyr --summary "Custom-R-Bundle"
```

2. Upload the new metapackage to your channel on anaconda.org by running the following commands:

```
conda install anaconda-client
anaconda login
anaconda upload custom-r-bundle-0.1.0-0.tar.bz2
```

Anyone can now access your custom R bundle from any computer by running the following command:

```
# Replace <USERNAME> with your anaconda.org username
conda install --channel <USERNAME> custom-r-bundle
```

Creating an environment with R

1. Download and install Anaconda.
2. Create a new conda environment with all the `r-essentials` conda packages built from CRAN by running the following command:

```
conda create --name r_env r-essentials r-base
```

3. Activate the environment by running the following command:

```
conda activate r_env
```

4. List the packages in the environment by running the following command:

```
conda list
```

The list shows that the package `r-base` is installed and `r-` is listed in the build string of the other R packages in the environment.

Creating a new environment with R

When creating a new environment, you can use R by explicitly including `r-base` in your list of packages:

```
# Replace <ENV_NAME> with a name for your R environment
conda create --name <ENV_NAME> r-base r-essentials
conda activate <ENV_NAME>
```

Uninstalling R Essentials

Uninstall the R Essentials package by running the following command:

```
# Replace <ENV_NAME> with the name of the R environment
conda activate <ENV_NAME>
conda remove r-essentials
```

Note: This removes only R Essentials and disables R language support. Other R language packages are not removed.

Resources

Hundreds of *R Language packages are available for use with Anaconda* with several ways to get them.

Working with GPU packages

The Anaconda Distribution includes several packages that use the GPU as an accelerator to increase performance, sometimes by a factor of five or more. These packages can dramatically improve machine learning and simulation use cases, especially deep learning. Read more about getting started with GPU computing in Anaconda.

While both AMD and NVIDIA are major vendors of GPUs, NVIDIA is currently the most common GPU vendor for machine learning and cloud computing. The information on this page applies only to NVIDIA GPUs.

GPU compatibility

GPU acceleration requires the author of a project such as TensorFlow to implement GPU-specific code paths for algorithms that can be executed on the GPU. A GPU-accelerated project will call out to NVIDIA-specific libraries for standard algorithms or use the NVIDIA GPU compiler to compile custom GPU code. Only the algorithms specifically modified by the project author for GPU usage will be accelerated, and the rest of the project will still run on the CPU.

For most packages, GPU support is either a compile-time or run-time choice, allowing a variant of the package to be available for CPU-only usage. When GPU support is a compile-time choice, Anaconda will typically need to build two versions of the package, to allow the user to choose between the "regular" version of the project that runs on CPU only and the "GPU-enabled" version of the project that runs on GPU.

Due to the different ways that CUDA support is enabled by project authors, there is no universal way to detect GPU support in a package. For many GPU-enabled packages, there is a dependency on the `cudatoolkit` package. Other packages such as Numba do not have a `cudatoolkit` dependency, because they can be used without the GPU.

Hardware requirements

NVIDIA released the CUDA API for GPU programming in 2006, and all new NVIDIA GPUs released since that date have been CUDA-capable regardless of market. Although any NVIDIA GPU released in the last 10 years will technically work with Anaconda, these are the best choices for machine learning and specifically model training use cases:

- Tesla P100 or V100
- Titan RTX
- GeForce RTX 3050
- Various recent Quadro models

Deployed models do not always require a GPU. When a GPU is required for a deployed model, there are other Tesla GPU models that are more optimized for inference than training, such as the Tesla P4, P40, and T4.

Cloud and on-premise data center deployments require Tesla cards, whereas the GeForce, Quadro, and Titan options are suitable for use in workstations.

Most users will have an Intel or AMD 64-bit CPU. Anaconda recommends having at least two to four times more CPU memory than GPU memory, and at least 4 CPU cores to support data preparation before model training. There are a limited number of Anaconda packages with GPU support for IBM POWER 8/9 systems as well.

Software requirements

The best performance and user experience for CUDA is on Linux systems. Windows is also supported. No Apple computers have been released with an NVIDIA GPU since 2014, so they generally lack the memory for machine learning applications and only have support for Numba on the GPU.

Installing Linux on Windows with WSL

Windows Subsystem for Linux (WSL) lets Windows users install a Linux distribution and run Linux applications, use Linux command-line tools, and more easily interact with Linux-first frameworks, directly on Windows. Several GPU-enabled packages available through Anaconda are either exclusively available for Linux or are primarily optimized for Linux environments. WSL can provide Windows users with a potential way to access these Linux-dependent packages.

Caution: While WSL can be used to access GPU-enabled packages, this workflow is not officially supported by Anaconda. Users who choose this approach do so at their own risk. For those specifically interested in PyTorch with GPU support on Windows: Anaconda is actively developing a native Windows build of PyTorch with CUDA support, which will be available in an upcoming release.

To run CUDA on WSL and install Linux, follow the steps in NVIDIA's CUDA on WSL User Guide. You can find additional information about installing and using WSL in Microsoft's WSL documentation.

Once installed, launch WSL, and follow the Linux instructions to install either *Anaconda Distribution* or *Miniconda*. Note that this requires a new installation even if you already have Anaconda or Miniconda on Windows, and you'll need to replicate any environments you want to use in your Linux subsystem.

Anaconda requires that the user has installed a recent NVIDIA driver that meets the version requirements in the table below. Anaconda does not require the installation of the CUDA SDK.

Ubuntu and some other Linux distributions ship with a third party open-source driver for NVIDIA GPUs called Nouveau. CUDA requires replacing the Nouveau driver with the official closed source NVIDIA driver.

All other CUDA libraries are supplied as conda packages.

GPU-enabled packages are built against a specific version of CUDA. Currently supported versions include CUDA 11.8, 12.0, 12.1, and 12.2. The NVIDIA drivers are designed to be backward compatible to older CUDA versions, so a system with NVIDIA driver version 525.60.13 can support CUDA 12.0 packages and earlier. As a result, if a user is not using the latest NVIDIA driver, they may need to manually pick a particular CUDA version by selecting the version of the `cudatoolkit` conda package in their environment. To select a `cudatoolkit` version, add a selector such as `cudatoolkit=12.1` to the version specification.

Required NVIDIA driver versions, excerpted from the NVIDIA CUDA Toolkit Release Notes:

CUDA Version	Linux x86_64 Driver Version	Windows x86_64 Driver Version
CUDA 11.8.x	>= 450.80.02	>= 452.39
CUDA 12.0.x	>= 525.60.13	>= 527.41
CUDA 12.1.x	>= 525.60.13	>= 527.41
CUDA 12.2.x	>= 525.60.13	>= 527.41

Sometimes specific GPU hardware generations have a minimum CUDA version. As of August 27th, 2018, the only relevant constraint is that the Tesla V100 and Titan V (using the "Volta" GPU architecture) require CUDA 9 or later.

Available packages

TensorFlow

TensorFlow is a general machine learning library, but most popular for deep learning applications. There are three supported variants of the `tensorflow` package in Anaconda, one of which is the NVIDIA GPU version. This is selected by installing the meta-package `tensorflow-gpu`.

```
conda install tensorflow-gpu
```

Other packages, such as Keras, depend on the generic `tensorflow` package name and will use whatever version of TensorFlow is installed. This makes it straightforward to switch between variants in an environment.

PyTorch

PyTorch is another machine learning library with a deep learning focus. PyTorch detects GPU availability at run-time, so the user does not need to install a different package for GPU support.

```
conda install pytorch
```

Caffe (Linux only)

Caffe was one of the first popular deep learning libraries.

```
conda install caffe-gpu
```

Chainer/CuPy

Chainer is a deep learning library that uses NumPy or CuPy for computations.

```
conda install chainer
```

Chainer's companion project CuPy is a GPU-accelerated clone of the NumPy API that can be used as a drop-in replacement for NumPy with a few changes to user code. When CuPy is installed, Chainer is GPU-accelerated. CuPy can also be used on its own for general array computation.

```
conda install cupy
```

XGBoost (Windows/Linux only)

XGBoost is a machine learning library that implements gradient-boosted decision trees. Training several forms of trees is GPU-accelerated.

```
conda install py-xgboost-gpu
```

MXNet (Linux only)

MXNet is a machine learning library supported by various industry partners, most notably Amazon. Like TensorFlow, it comes in three variants, with the GPU variant selected by the `mxnet-gpu` meta-package.

```
conda install mxnet-gpu
```

Numba

Numba is a general-purpose JIT compiler for Python functions. It provides a way to implement custom GPU algorithms in purely Python syntax when the `cudatoolkit` package is present.:

```
conda install numba cudatoolkit
```

GPU support in Enterprise

GPU-enabled conda packages can be used in Data Science & AI Workbench projects when the cluster has resource profiles that include GPUs. For more details see the GPU support section of the Workbench FAQ.

Applications/Integrations

Docker

Docker is an open platform for developers and system administrators to build, ship, and run distributed applications, whether on laptops, data center virtual machines, or the cloud. Anaconda, Inc. provides Anaconda and Miniconda Docker images.

Read the official Docker documentation and specifically the information related to Docker images.

Begin by browsing the available Anaconda images on our Docker profile.

To obtain a fully working Anaconda image:

1. In a terminal window, run this command to display a list of available images:

```
docker search continuumio
```

2. Pull the desired image:

```
docker pull continuumio/miniconda3
```

3. Create a container using the image:

```
docker run -t -i continuumio/miniconda3 /bin/bash
```

   This gives you direct access to the container where the conda tool is already available.

4. Test the container:

```
conda info
```

   You now have a fully working Anaconda image.

To install and launch the Jupyter Notebook, execute the following command all on one line from the host machine:

```
docker run -i -t -p 8888:8888 continuumio/miniconda3 /bin/bash \
-c "/opt/conda/bin/conda install jupyter -y --quiet && mkdir \
/opt/notebooks && /opt/conda/bin/jupyter notebook \
--notebook-dir=/opt/notebooks --ip='*' --port=8888 \
--no-browser --allow-root"
```

Tip: This command is formatted for readability. If your shell supports line continuation (e.g., bash, zsh), you can run it as shown. Otherwise, remove the backslashes (\) and combine it into a single line.

To access the Jupyter notebook, copy and paste the server URL from the terminal output. It will look something like `http://localhost:8888/tree?token=<TOKEN_VALUE>` or, if you are using a Docker Machine VM, `http://<DOCKER-MACHINE-IP>:8888/tree?token=<TOKEN_VALUE>`.

TensorFlow

TensorFlow enables your data science, machine learning, and artificial intelligence workflows. This page shows how to install TensorFlow using the conda package manager included in Anaconda and Miniconda.

TensorFlow CPU with conda is supported on 64-bit Ubuntu Linux 16.04 or later and macOS 10.12.6 or later.

TensorFlow GPU with conda is only available though version 2.4.1 (2021). For the latest TensorFlow GPU installation, follow the installation instructions on the TensorFlow website.

Install TensorFlow

1. Download and install Anaconda or *Miniconda*.
2. Open a terminal application and use the default bash shell.
3. Choose a name for your TensorFlow environment, such as "tf".
4. Use the following commands to install the current release of TensorFlow. CPU-only is recommended for beginners.

CPU-only TensorFlow

```
conda create --name tf tensorflow
conda activate tf
```

GPU TensorFlow

Note: GPU TensorFlow is only available via conda for Windows and Linux.

```
conda create --name tf-gpu tensorflow-gpu
conda activate tf-gpu
```

TensorFlow is now installed and ready to use.

For using TensorFlow with a GPU, refer to the TensorFlow documentation, specifically the section on device placement.

CUDA versions

GPU TensorFlow uses CUDA. For a version compatibility table for GPU TensorFlow on Linux, see https://www.tensorflow.org/install/source#gpu. For Windows, see https://www.tensorflow.org/install/source_windows#gpu.

GPU TensorFlow conda packages are currently only supported for Windows or Linux.

Note: TensorFlow 2.10 was the last release that supported GPU on Windows Native.

To install GPU TensorFlow with a non-default CUDA version like 9.0, run the following commands:

```
conda create --name tf-gpu-cuda9 tensorflow-gpu cudatoolkit=9.0
conda activate tf-gpu-cuda9
```

Nightly builds

Advanced users may wish to install the latest nightly build of TensorFlow. These nightly builds are unstable and are only available as pip packages on PyPI.

To install the nightly build of CPU-only TensorFlow:

```
conda create --name tf-n python
conda activate tf-n
pip install tf-nightly
```

Or, to install the nightly build of GPU TensorFlow on Linux or Windows:

```
conda create --name tf-n-gpu python
conda activate tf-n-gpu
pip install tf-nightly-gpu
```

Using IDEs

Data science is a team sport, so we have built the Anaconda platform to be language-agnostic as well as extensible.

You can use the following IDEs with Anaconda or Miniconda:

PyCharm

Note: These instructions refer to Anaconda Distribution exclusively, but will also work with Miniconda.

PyCharm is an IDE that integrates with IPython Notebook, has an interactive Python console, and supports Anaconda as well as multiple scientific packages. PyCharm also supports creating virtual environments for Python with conda.

Tip: More of a visual learner? to follow along with our Create a simple Python program with PyCharm!

Configuring a conda environment in PyCharm

Python projects often require specific setups, with access to different versions of Python and different packages and their dependencies. Conda environments can be used with PyCharm projects to ensure that each of your projects are being built and run to the exact Python specifications that they require.

You can create a new conda environment when you create a new Python project in PyCharm, configure an existing conda environment for a new project, or switch conda environments within a project that already exists.

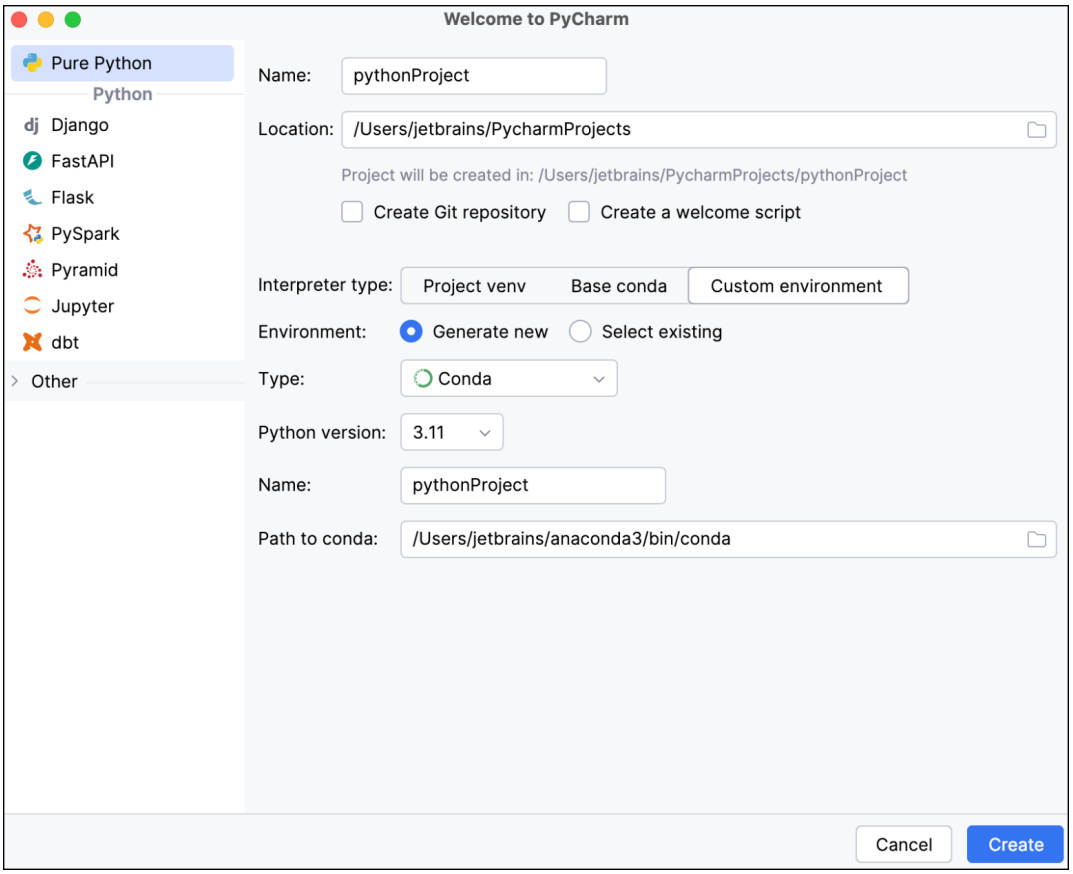
Creating a new conda environment from a PyCharm project

PyCharm creates a basic conda environment for you (with a selected Python version) as part of the initial project setup, and links your PyCharm project to that environment.

1. After opening PyCharm, click **New Project**.
2. In the **New Project** screen, create the project name and its location.
3. To have your project under Git version control, select **Create Git Repository**.
4. To add the main.py file to your project, select **Create welcome script**.

> **Note:** The welcome script file contains a very simple Python code sample and can be a starting point for your project.

5. Select **Custom environment**, then select *Generate New*.
6. From the **Type** dropdown, select *Conda*.
7. From the **Python version** dropdown, select the Python version you want.
8. Create your environment name.
9. Typically, PyCharm will detect the conda installation. If not, you can specify the conda location in the **Path to conda** field.

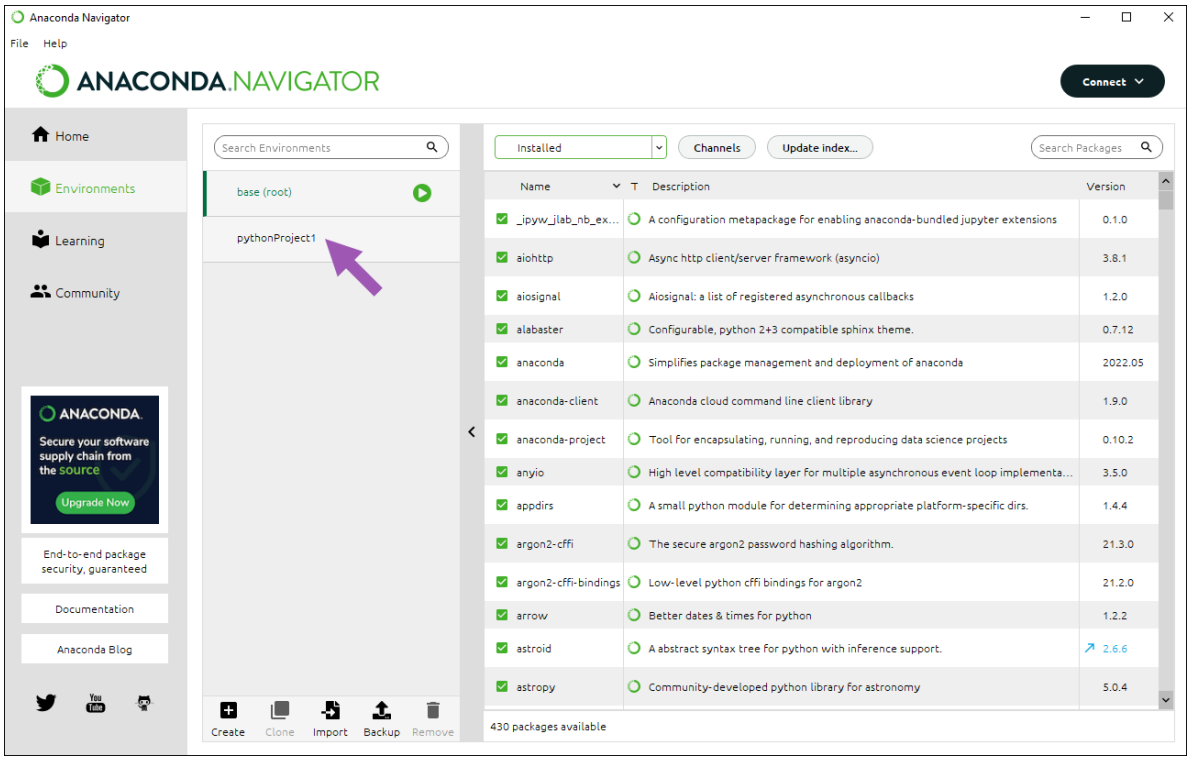


10. Click **Create** to create the PyCharm project and conda environment.

11. You can check that the conda environment was created by using `conda info --envs` in your Terminal or Anaconda Prompt:

```
conda info --envs
# conda environments:
base                  *  C:\Users\doc\anaconda3
pythonProject1           C:\Users\doc\anaconda3\envs\pythonProject1
```

Or you can look at the Environments tab in Navigator to see the same information:

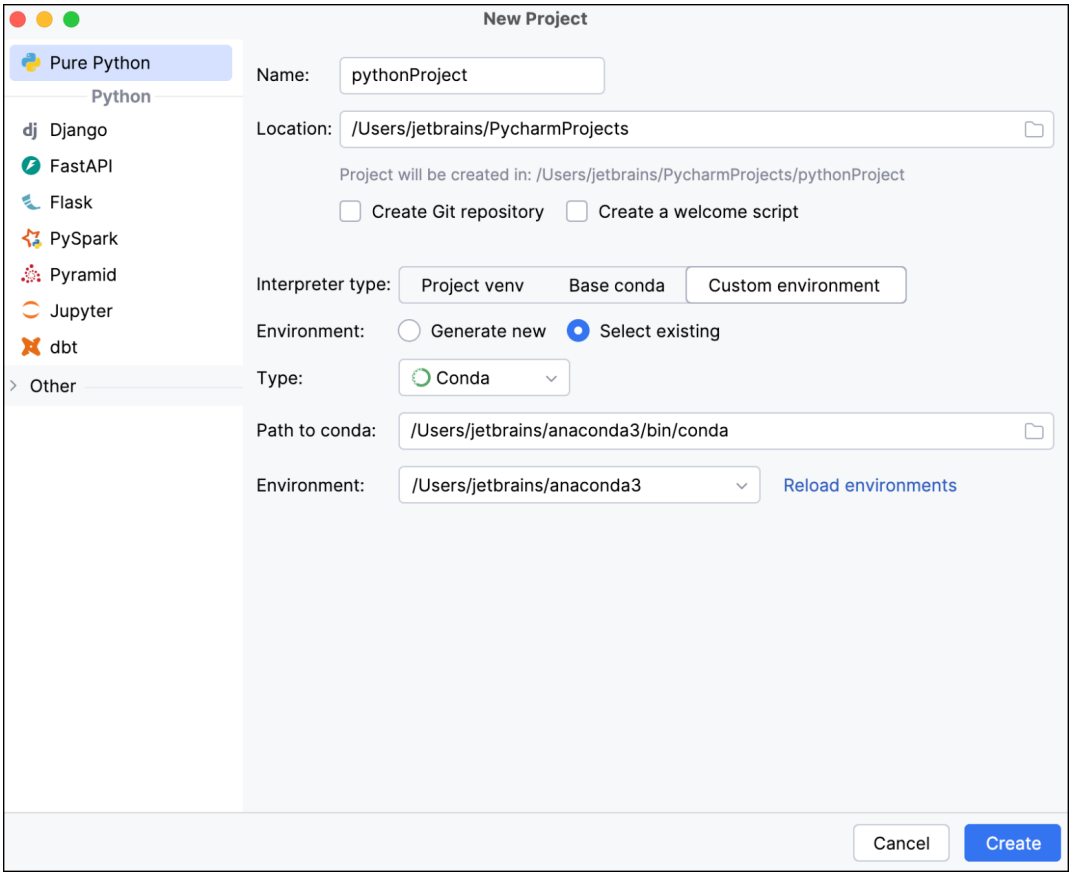


Configuring a PyCharm Project with an existing conda environment

Let's say you've already created a conda environment that you know will be perfect for your latest PyCharm project. You can easily link an existing conda environment to a project in PyCharm using the following instructions:

1. After opening PyCharm, click **New Project**.
2. In the **New Project** screen, create the project name and its location.
3. Select **Custom environment**, then *Select existing*.
4. From the **Type** dropdown, select *Conda*.
5. Typically, PyCharm will detect the conda installation. If not, you can specify the conda location in the **Path to conda** field.
6. Select the environment from the list of environments.

> **Note:** If you specified the path to conda manually, you may need to select **Reload environments**.



7. Click **Create** to finish creating your new project.

Switching environments within a PyCharm Project

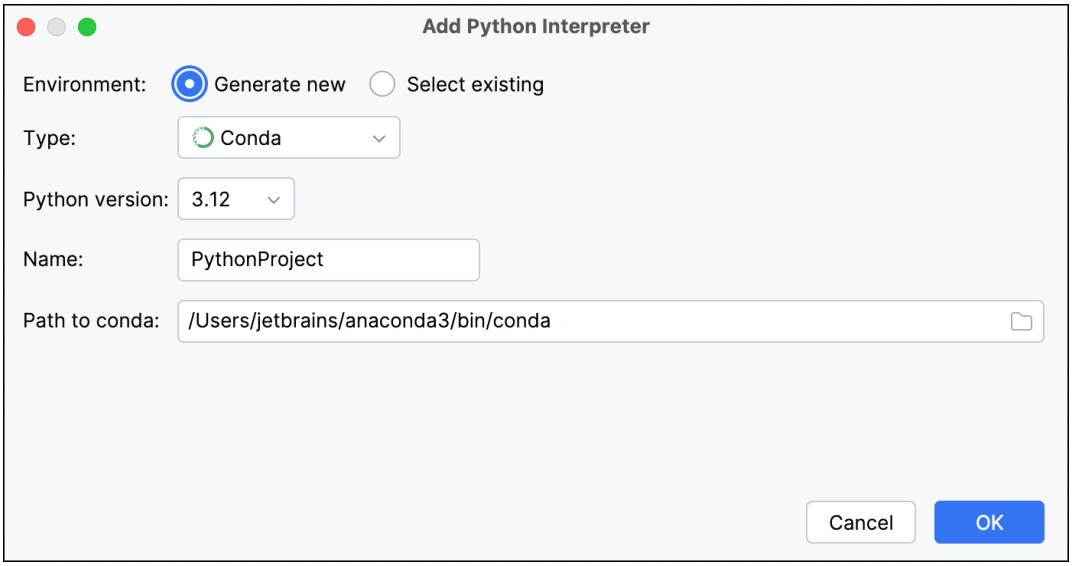
If you want to change the conda environment associated with an ongoing project, update the project environment preferences using the following instructions:

1. Open the PyCharm project associated with the conda environment you want to change.
2. Click **IDE and Project Settings** in the top-right corner of the screen, then select *Settings*.
3. Select **Project: <PROJECT_NAME>**, then **Python Interpreter**.
4. Select a new Python Interpreter by clicking **Add Interpreter**.

New environment

To create a new environment, follow these steps:

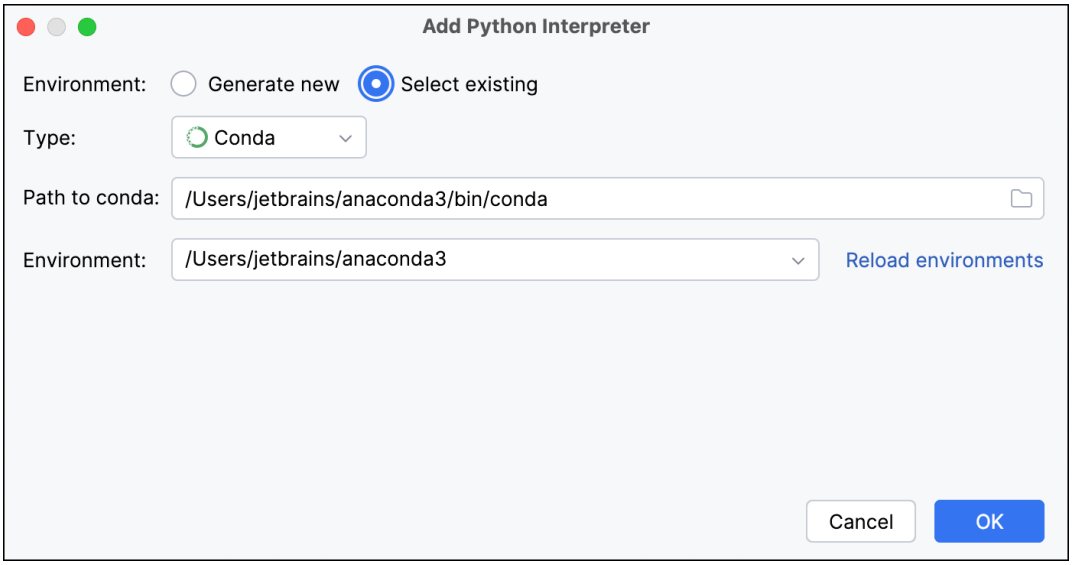
1. Select **Generate new**.
2. Select **Conda**.
3. Select the **Python version**.
4. Create an environment name.



Existing environment

To use an existing environment, follow these steps:

1. Select **Select existing**.
2. Select **Conda**.
3. Select an environment from the **Environment** dropdown.

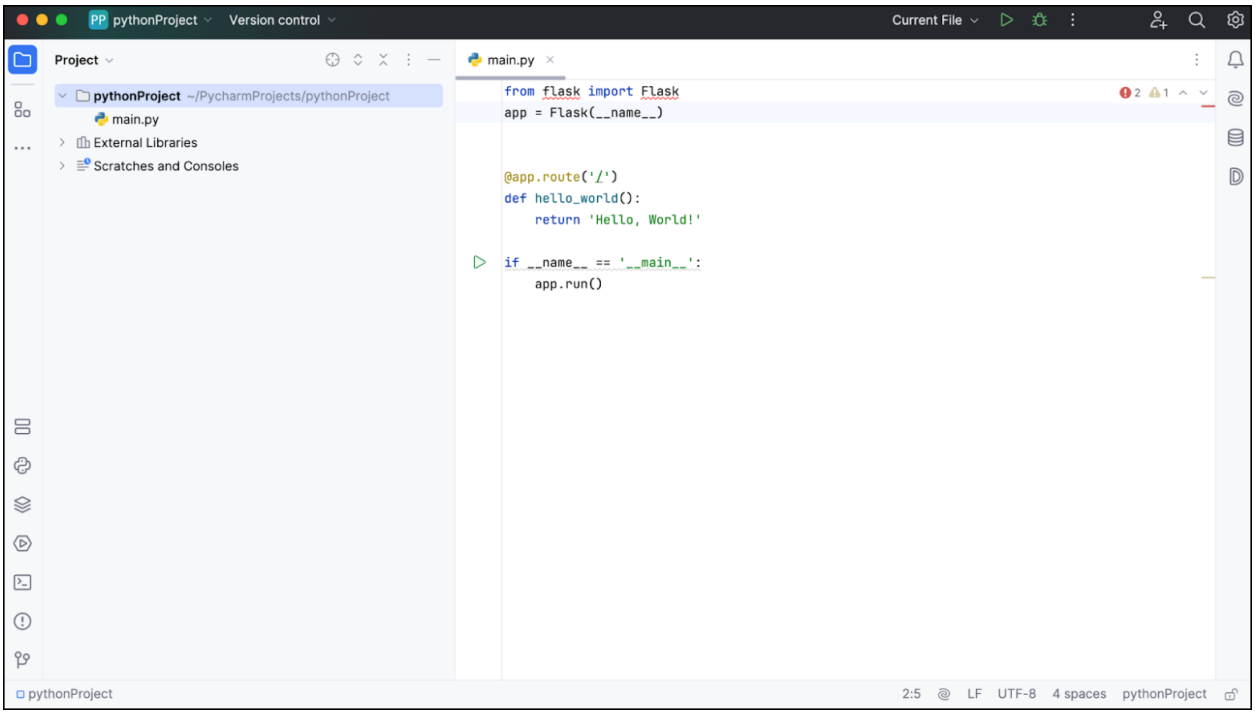


5. Click **OK** to finish changing your PyCharm project's environment.

Adding a package to a project

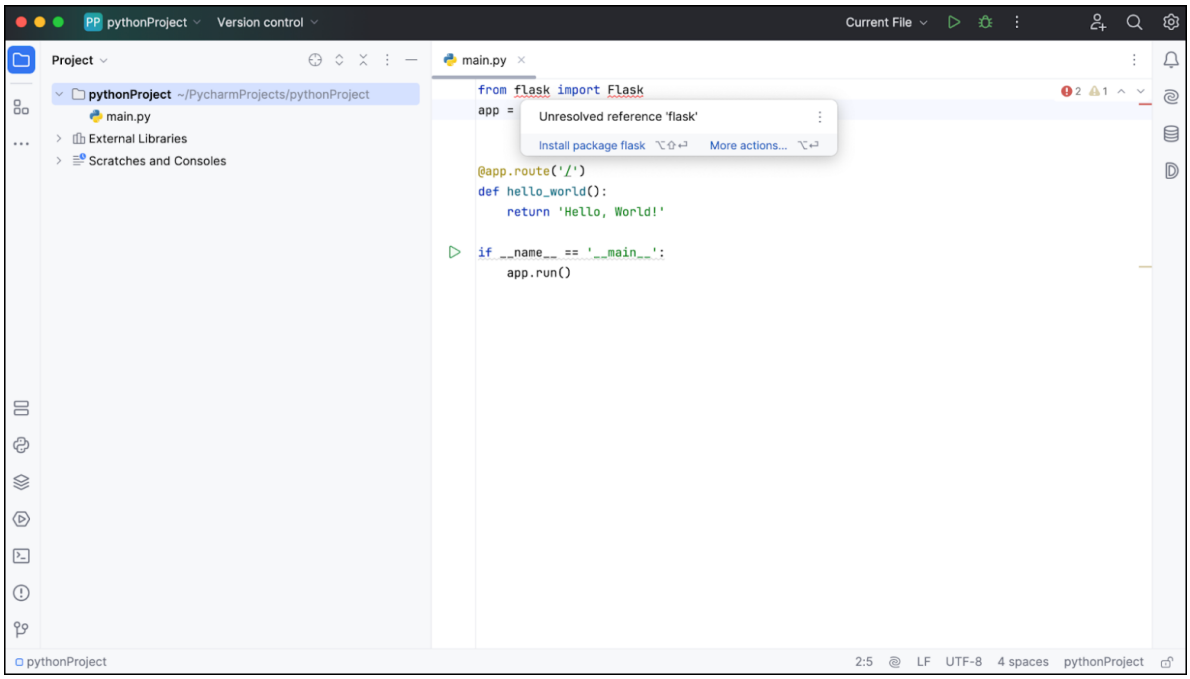
If you've added a package to your PyCharm project that is not within the standard Python library, you can add it to your project's conda environment with PyCharm.

The project in this example uses the `flask` package.

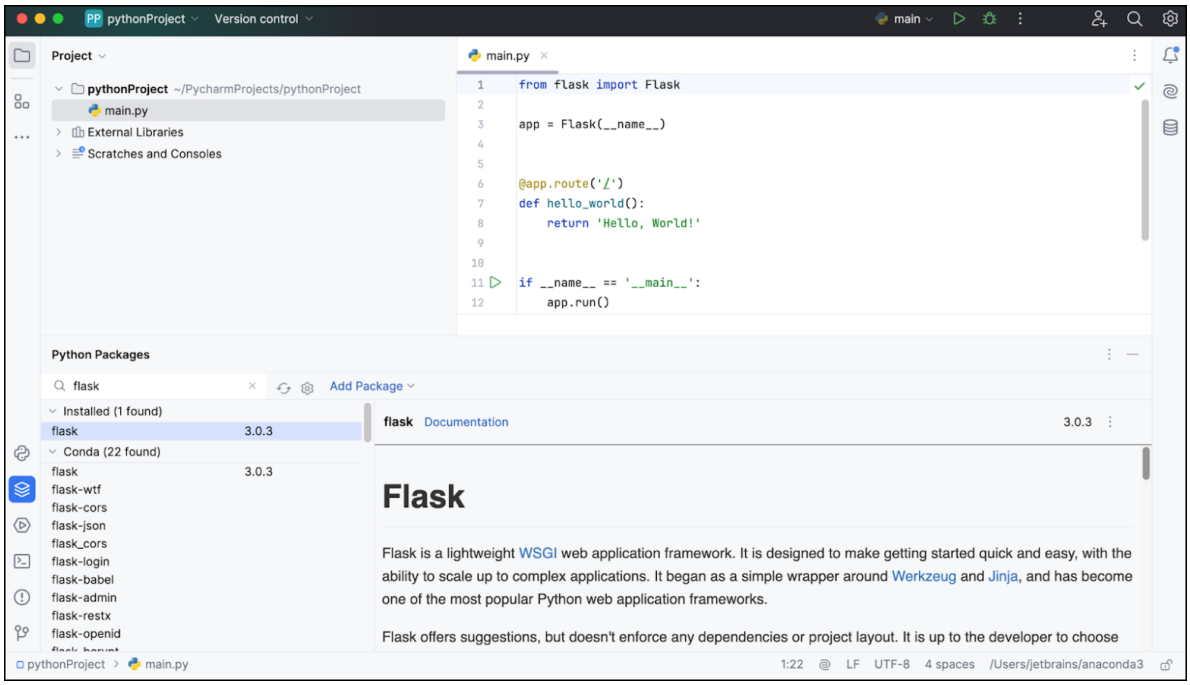


You can see that the package import is red underlined in the code. If you hover over one of them, PyCharm tells you that the reference to `flask` is unresolved. That means that the package is not available to the program and needs to be installed.

1. Click **Install package flask** in the popup to install `flask` to the environment you currently have connected to your project.



2. After `flask` is installed, it will be displayed in your project's python packages. Click **Python Packages** and search for "flask" to view newly installed package.



Adding a repository to a project

Sometimes packages you're using in your PyCharm project won't be available in any Anaconda default channels. To add a new repository to your PyCharm project, use the Python Packages tool window.

1. Go to **View > Tool Windows > Python Packages**.
2. Click the gear beside the search bar.
3. Click **Manage Repositories**
4. Click **Add**.
5. Enter the name of the repository.
6. Enter the repository URL.
7. If the repository is local, choose "None" for **Authorization**. Otherwise, choose "Basic HTTP" and enter your username and password for the repository.

For repositories like conda-forge, the easiest way to install packages is to use use Anaconda Prompt (Terminal on macOS/Linux). Activate your project's environment and install the package.

```
# Replace <MY_ENV> with the name of the your environment
conda activate <MY_ENV>

# Replace <CHANNEL_NAME> with the name of the channel you are trying to source from
# Replace <PKG_NAME> with the name of the package you are trying to install
conda install --channel <CHANNEL_NAME> <PKG_NAME>
```

For more information on adding repositories to your PyCharm project's conda environment, see the PyCharm documentation.

Spyder

Spyder is an open-source integrated development environment (IDE) included with Anaconda Distribution that offers advanced editing, interactive testing, debugging, and introspection features. Spyder integrates with popular libraries such as NumPy, SciPy, pandas, and more!

Tip: More of a visual learner? to follow along with our Create a simple Python program with Spyder!

Launching Spyder

After installing Anaconda and creating and activating your environment, you can start Spyder on Windows, macOS, or Linux. Launch Spyder using either Navigator or a command line terminal:

Note:

- Spyder is only available by default in your base environment. For any other environments you have open in Navigator or your CLI, you may need to install Spyder in that environment.
- You can also use Spyder with Miniconda. Use `conda install spyder` to install the Spyder package, as it does not come with Miniconda automatically.

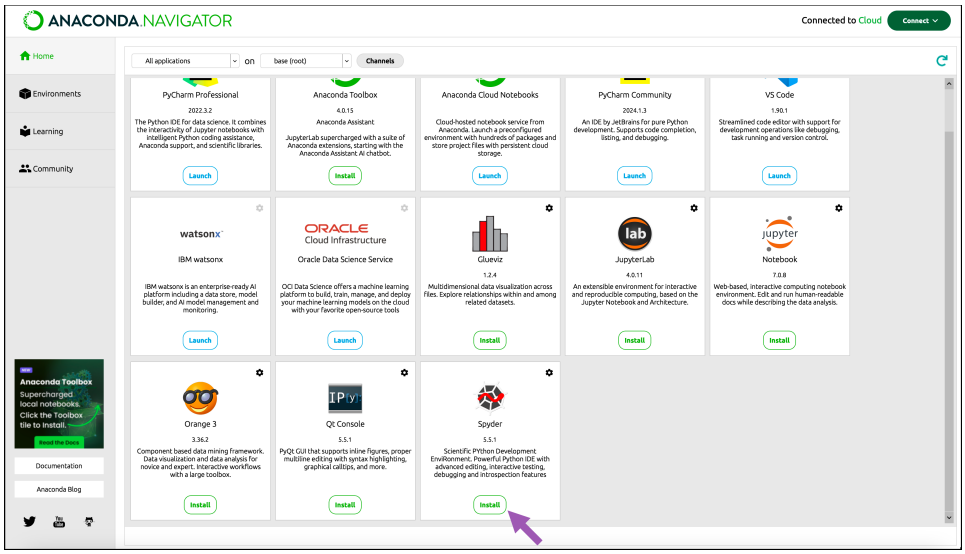
Navigator

To launch Spyder using Navigator:

1. Open Navigator.
2. On the **Home** tab, click **Launch** on the Spyder tile.

If Spyder is not installed, follow these steps:

1. Click **Install** within the Spyder tile.



2. Once installed, click **Launch** on the Spyder tile.

Command line

To launch Spyder at the command line, open a terminal and run the following command:

```
spyder
```

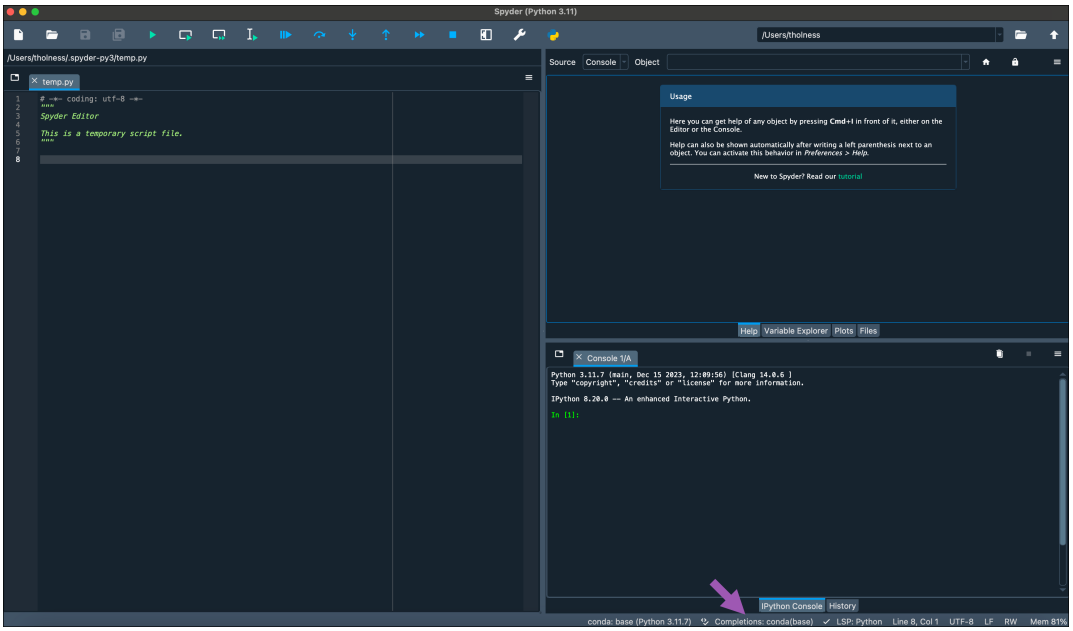
Creating and activating a conda environment

Before starting your Python project, Anaconda recommends creating a conda environment to isolate your project's software packages and manage their dependencies. For more information about creating and activating a conda environment, see Environments.

Selecting your environment's Python interpreter

To ensure your code has access to the correct code completion and type information for your project, you must activate the conda environment associated with your project and select it as the Python interpreter in Spyder.

1. Open Spyder.
2. Select **Completions** in the status bar.



3. Select **Use the following Python interpreter**.
4. Select your preferred environment.
5. Click **Ok**.

For more information, see the official Spyder website and documentation.

Visual Studio Code (VS Code)

Note: These instructions refer to Anaconda Distribution exclusively, but will also work with Miniconda.

Visual Studio Code (VS Code) is a free, cross-platform source code editor that works with Anaconda Distribution and Miniconda. Installing the Python for Visual Studio Code extension enables VS Code to connect to a conda environment's version of Python as an interpreter for your Python code files.

Tip: More of a visual learner? to follow along with our Create a simple Python program with VS Code!

Launching VS Code in Navigator

With VS Code installed, you can launch the application from *Navigator* 1.9.12 or later by clicking the VS Code tile on the **Home** page.

When you launch VS Code from Navigator, it will automatically use the Python interpreter in the currently selected environment.

Creating a conda environment

Before starting your Python project, Anaconda recommends creating a conda environment to isolate your project's software packages and manage their dependencies.

1. Open a terminal in VS Code.
2. Create a conda environment for your Python project by running the following command:

```
# Replace <ENV_NAME> with your environment name
# Replace <VERSION> with your desired version of Python
conda create --name <ENV_NAME> python=<VERSION>
```

Note: If you do not specify a version of Python, conda will attempt to install the latest version from its available channels.

For more information about managing environments with conda, see the official conda documentation.

For more information about Python environments in VS Code, see the official VS Code documentation.

Selecting Anaconda as a Python interpreter

Now that your conda environment has been created, select the environment's version of Python as an interpreter. This ensures that your code has access to the correct code completion and type information available in the specific Python version and packages installed in your conda environment.

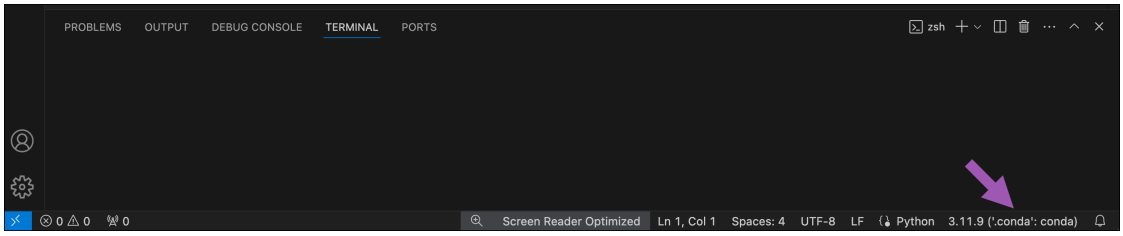
1. Open any Python file.
2. To select a Python interpreter, open the Command Palette by pressing Ctrl+Shift+P (Windows, Linux)/Cmd+Shift+P (Mac).
3. Click *Python: Select Interpreter* in the Command Palette and select the interpreter associated with your Anaconda environment.

Tip: Anaconda interpreter typically appears as Python. 3.x.x ('<YOUR_ENV_NAME>': conda). If your environment's interpreter does not appear in the Select Interpreter list, click **Refresh**.

You can also manually enter an interpreter path by selecting **Enter interpreter path...**.

For more information on finding a specific interpreter path in your Anaconda installation, see *Finding your Anaconda Python interpreter path*.

The selected interpreter displays in the bottom right corner of the status bar in VS Code.



Testing your setup

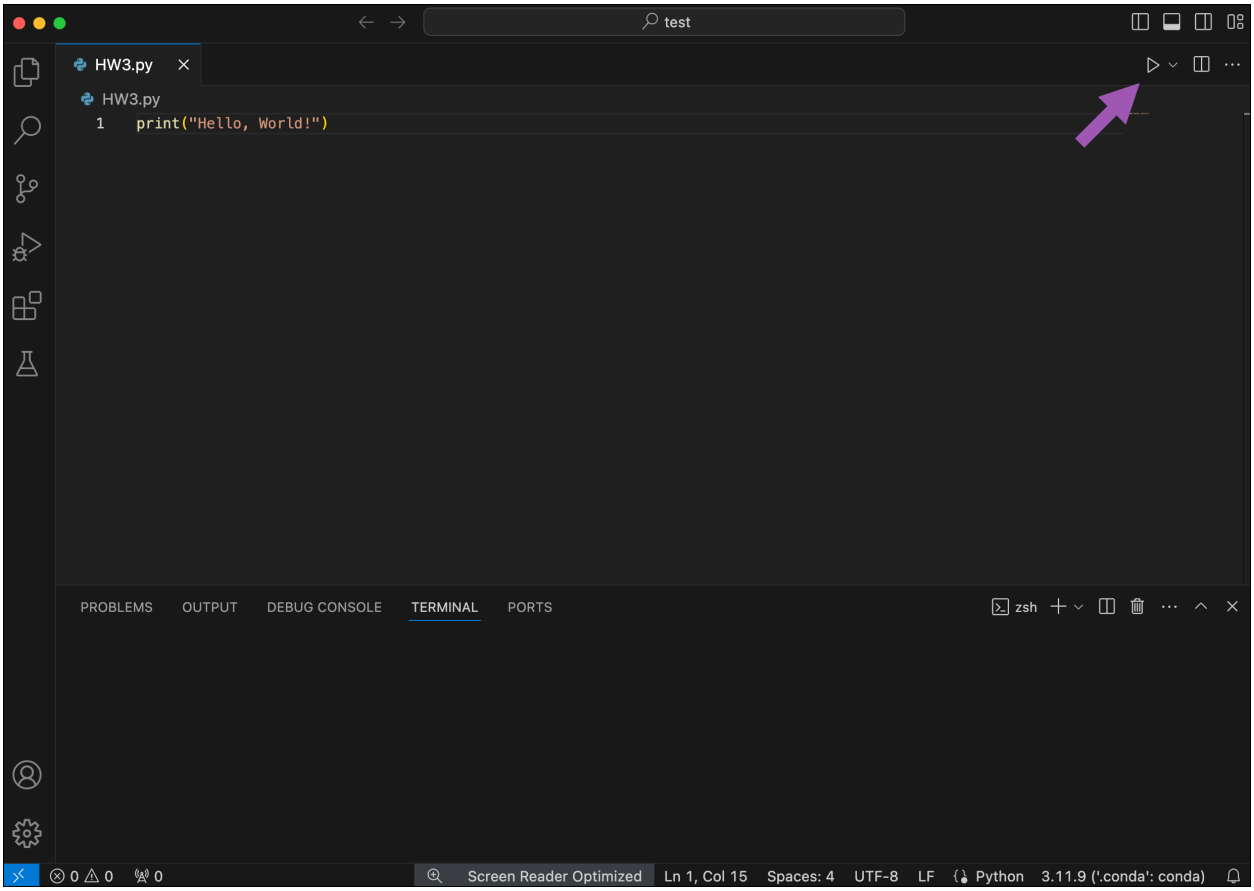
You are now ready to execute your Python functions in VS Code!

1. Create a new Python (.py) file.
2. Add the following code to your file:

```
# This will display "Hello, World!" in the terminal
 print("Hello, World!")

# This will display your system version in the terminal
import sys
print(sys.version)
```

3. Save the file.
4. Click **Run Python File**.



For more information on working with Python in VS Code, see Python in Visual Studio Code.

Finding your Anaconda Python interpreter path

IDEs often require you to specify the path to your Python interpreter. This path varies according to which operating system version and which Anaconda or Miniconda version you use, so you will need to search your file system to find the correct path to your Python interpreter.

You can search for the Python interpreter with your operating system's file manager, such as File Explorer on Windows, Finder on macOS, or Nautilus on Ubuntu Linux.

You can also use the command line to show the location of the Python interpreter in the active conda environment:

Windows

1. From the Start Menu, open the Anaconda Prompt.
2. Activate a conda environment that contains an installation of Python by running the following command:

```
# Replace <ENV_NAME> with the name of the environment
conda activate <ENV_NAME>
```

3. Locate the Python interpreter by running the following command:

```
where python
```

Here is an example command return for user `jsmith` running Anaconda3 on Windows 10:

```
C:\Users\jsmith\Anaconda3\python.exe

# Python image in a conda environment called myenv
C:\Users\jsmith\Anaconda3\envs\myenv\python.exe
```

macOS and Linux

1. Open a terminal window.
2. Activate a conda environment that contains an installation of Python by running the following command:

```
# Replace <ENV_NAME> with the name of the environment
conda activate <ENV_NAME>
```

3. Locate the Python interpreter by running the following command:

```
which python
```

Here is an example command return for user `jsmith` running Anaconda on macOS:

```
~/anaconda/bin/python

or

/Users/jsmith/anaconda/bin/python
```

Here is an example command return for user `jsmith` running Anaconda on Linux:

```
~/anaconda/bin/python

or

/home/jsmith/anaconda/bin/python
```

Note: Depending on whether you've installed Anaconda or Miniconda, the folder in your home directory might be named one of the following:

- `anaconda`
- `anaconda2`
- `anaconda3`
- `miniconda`
- `miniconda2`
- `miniconda3`

Note: IDEs often require you to specify the path to your Python interpreter. For more information, see *finding your Anaconda Python interpreter path*.

The following IDE tutorials have been deprecated and may be out of date:

- Eclipse and PyDev
- IDLE
- IntelliJ
- Ninja
- Python Tools for Visual Studio (PTVS)
- Sublime Text
- Wing

Reference

Frequently asked questions

Getting Anaconda

How do I get previous versions of Anaconda or older versions of packages?

You can download previous versions of Anaconda from the Anaconda installer archive.

The installation procedures for previous versions are the same as the installation for the current version. For graphical installs, double click the downloaded installer file and follow the prompts. For command line installs, run "bash filename.sh" and follow the prompts. The installer filenames and hashes for previous versions will be different.

Older versions of packages can usually be downloaded from the package repository or from https://anaconda.org/anaconda/PackageName.

Note: Replace `PackageName` with the name of the desired package.

EXAMPLE: At https://anaconda.org/anaconda/beautifulsoup4, previous versions of beautifulsoup4 are shown on the **Files** tab.

You can also search for packages from the command line with `conda search PackageName`.

I am behind a firewall. How can I download Anaconda?

If your corporate security settings do not allow you to download a Windows .exe executable file, download our zipped file.

Installing Anaconda

How can I install Anaconda on an air-gapped computer?

After you have the file, it's the same as any other install. Save a local copy of the appropriate Anaconda installer for the non-networked computer. You can copy the Anaconda installer using many different methods including a portable hard drive, USB drive, or CD.

After copying the installer to the air-gapped machine, follow the installation instructions for your operating system.

In what folder should I install Anaconda on Windows?

Anaconda recommends installing Anaconda or Miniconda into a directory that contains only 7-bit ASCII characters and no spaces, such as `C:\anaconda`. Do not install into paths that contain spaces such as `C:\Program Files` or that include `Unicode` characters outside the 7-bit ASCII character set. This helps ensure correct operation and no errors when using any open-source tools in either Python 3 or Python 2 conda environments.

Should I add Anaconda to the Windows PATH?

When installing Anaconda, Anaconda recommends that you do not add Anaconda to the Windows PATH because this can interfere with other software. Instead, open Anaconda with the Start Menu and select Anaconda Prompt, or use Anaconda Navigator (Start Menu - Anaconda Navigator).

Should I add Anaconda to the macOS or Linux PATH?

Anaconda recommends against adding Anaconda to the PATH manually. During installation, you will be asked "Do you wish the installer to initialize Anaconda3 by running conda init?" Anaconda recommends entering `yes` to allow the installer to initialize Anaconda3. If you enter `no`, then conda will not modify your shell scripts at all. In order to initialize after the installation process is done, first run `source <path to conda>/bin/activate` and then run `conda init`.

Note: Replace <path-to-anaconda> with the actual path of your installed Anaconda file.

What is the default path for installing Anaconda?

If you accept the default option to install Anaconda on the "default path", as of version 2024.02-1:

- For `pkg` installers (such as `osx-64` and `osx-arm64`), Anaconda is installed in `/opt/anaconda3`.
- For `sh` installers, Anaconda is installed in the home directory.

Examples:

- Windows 10: `C:\Users\<your-username>\Anaconda3\`
- macOS: `/Users/<your-username>/anaconda3` for the shell install, `/opt/anaconda3` for the graphical install. See the *macOS install instructions*.

- Linux: `/home/<your-username>/anaconda3`

Caution: If your username includes spaces, as is common on Windows systems, you should not use the default path. See *In what folder should I install Anaconda on Windows?*

I already have Python installed. Can I install Anaconda?

You do not need to uninstall other Python installations or packages before installing Anaconda. Even if you already have a system Python, another Python installation from a source such as the macOS Homebrew package manager and globally installed packages from pip such as pandas and NumPy, you do not need to uninstall, remove, or change any of them.

Install Anaconda or Miniconda normally. There is no need to set the PYTHONPATH environment variable.

To see if the conda installation of Python is in your PATH variable:

- On macOS and Linux, open the terminal and run `echo $PATH`.
- On Windows, open Anaconda Prompt and run `echo %PATH%`.

To see which Python installation is currently set as the default:

- On macOS and Linux, open the terminal and run `which python`.
- On Windows, open Anaconda Prompt and run `where python`.

To see which packages are installed in your current conda environment and their version numbers, in your terminal window or Anaconda Prompt, run `conda list`.

How can I use Anaconda on older systems?

See *Using Anaconda on older operating systems*.

Using conda packages

How can I use TKinter?

Make sure the conda package `tk` is installed:

```
conda list tk
```

If it is not installed, run:

```
conda install tk
```

Python programs can use TKinter with `import Tkinter` on Python 2 or `import tkinter` on Python 3.

How can I use Cython on macOS?

Cython needs a C compiler, so you need to install Xcode.

How can I use Theano?

Theano requires gcc for acceleration.

To install Theano with acceleration:

- On Windows, run `conda install theano`.
- On Linux and macOS run `conda install gcc theano`.

Note: Theano is available from the default Anaconda channels for Windows, macOS, and Linux with the command `conda install theano`.

How can I use GPUs with Anaconda?

See *Working with GPU packages*.

General

How is CPython compiled?

For information on building CPython, see the Python Developer's Guide.

How do I cite Anaconda in an academic paper?

To cite Anaconda in an academic paper, use the recommended format. Example:

Anaconda Software Distribution. Computer software. Vers. 2-2.4.0. Anaconda, Nov. 2016. Web. <https://anaconda.com>.

How to contribute

Community engagement makes Anaconda Distribution, conda, and conda-build better. We value our open-source community and encourage all users to contribute to the Anaconda ecosystem. The best contributions start by helping and encouraging others, especially newcomers who are struggling with something you've overcome. See below for other ways you can contribute.

Social

The easiest way to contribute is to tell your friends about all of the things you can do with Anaconda. Be sure to mention that Anaconda provides package and environment management and over 7,500+ open source packages.

Check our social media to keep up with what's happening at Anaconda and add to the conversation.

Twitter | Facebook | LinkedIn |

Community Help

Join the Anaconda community to help other users answer questions, debug issues, and suggest solutions.

GitHub issues

If you want to get involved in contributing code for Anaconda, conda, or conda-build, Anaconda recommends collaborating with others, resolving bug issues, and submitting pull requests with those resolutions. Be sure to review the conda governance policy before contributing to conda or conda-build.

- Conda issues
- Conda-build issues
- Anaconda issues

Stack Overflow

Answer questions and suggest resolutions and workarounds on Stack Overflow.

Documentation

Notice an error or gap in our documentation? We welcome pull requests for conda and conda-build documentation improvements and additions.

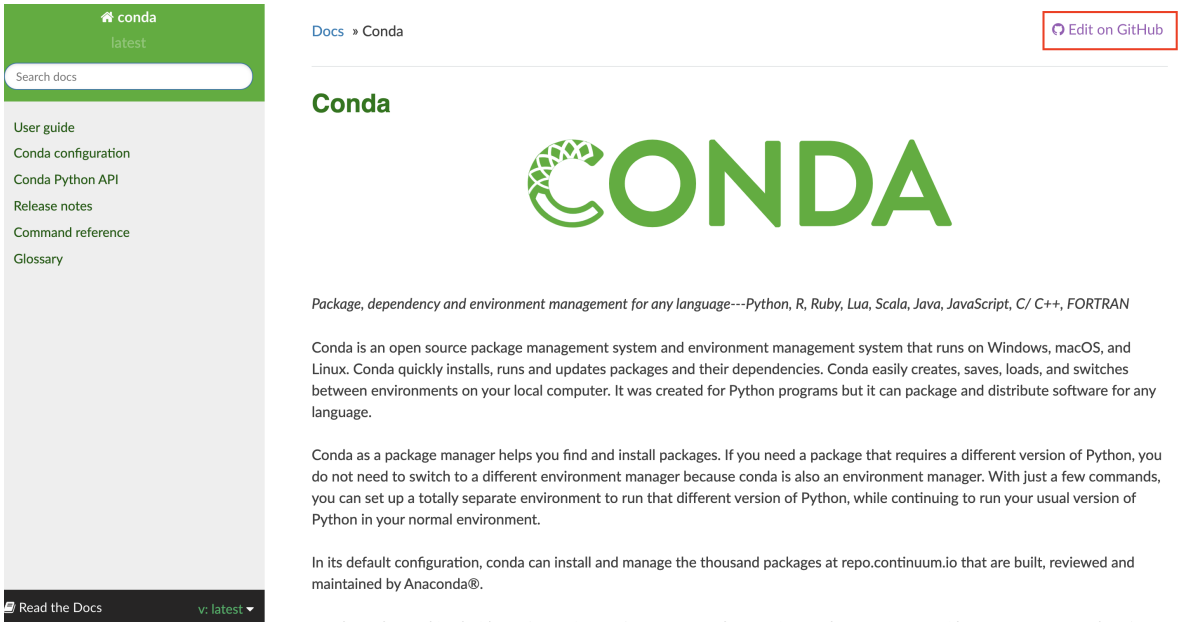
- Conda documentation
- Conda GitHub
- Conda-build documentation
- Conda-build GitHub

If a documentation change is needed in Distribution, open a ticket on anaconda-issues.

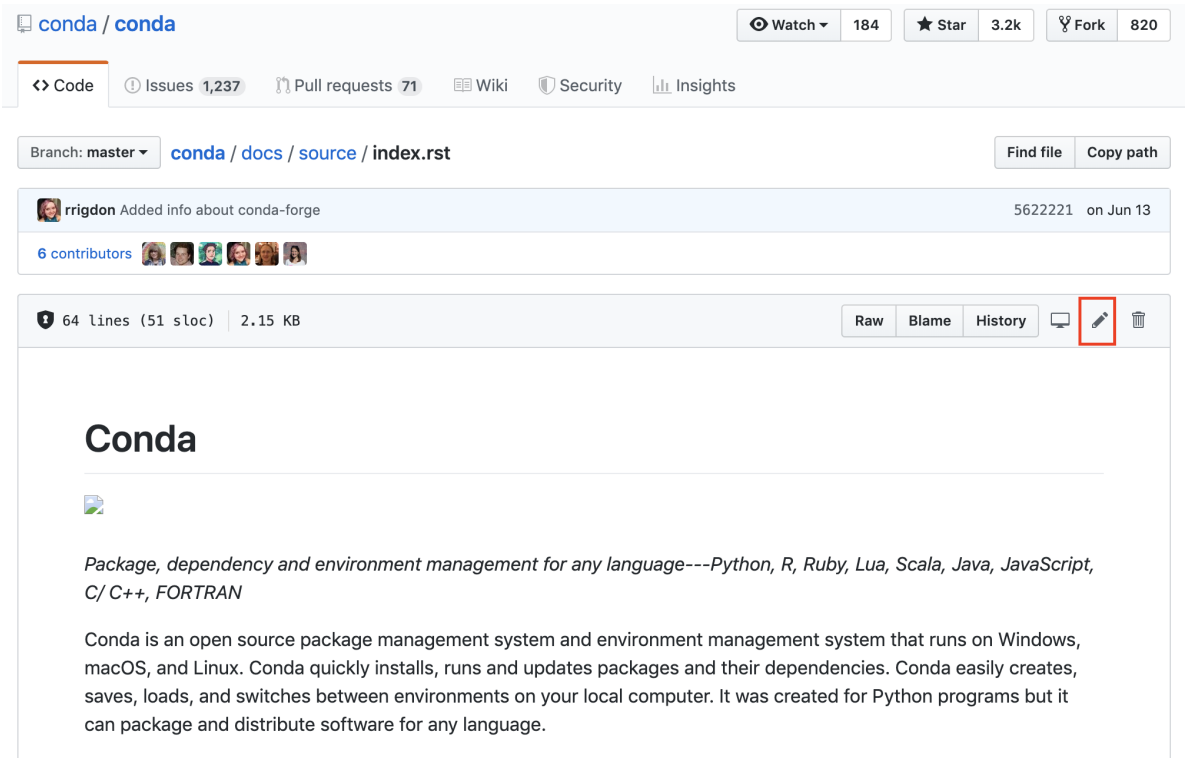
Example documentation contribution

Follow the directions below to submit a documentation PR using the GitHub interface.

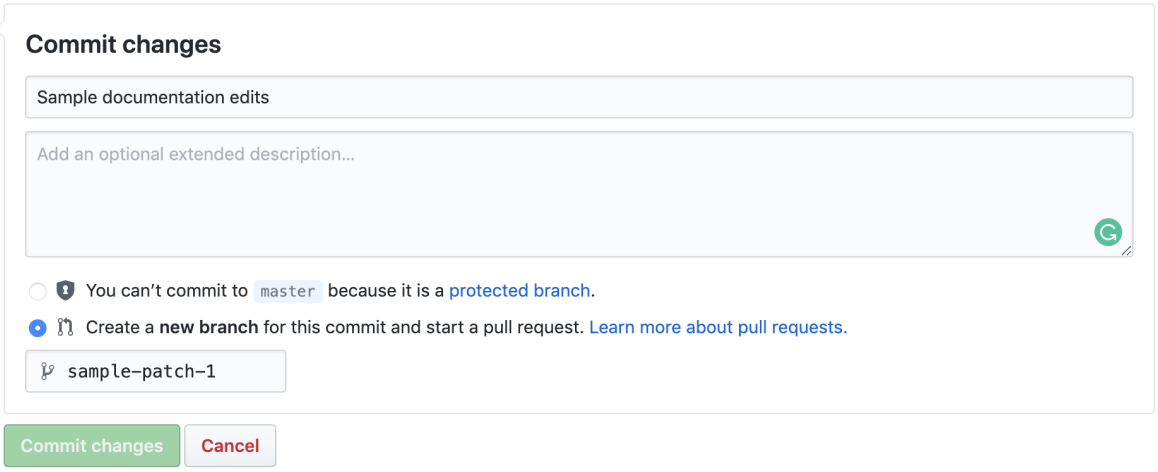
1. Start in the conda or conda-build documentation.
2. Select "Edit on GitHub" on the page needing the edit.



3. Edit the file in GitHub.



4. Commit your changes.



5. PR review process
    - PR is submitted.
    - Anaconda community members and/or staff review the PR, providing comments and revisions.
    - New contributors sign the CLA.
    - PR is merged.

Conda-forge feedstocks

Contribute to conda-forge feedstocks where you can improve, update, and/or add new conda-build recipes to conda-forge. See our tutorials on how to build conda-build recipes.

The recipes here are often used as the base of recipes used to build packages for defaults/repo.anaconda.com. Helping conda-forge increases the number and quality of packages available to install with conda, as well as helping Anaconda do the same for packages shipped in defaults.

Tip: A good way to find feedstocks to work on is to look at the staged recipes issues with the "Package request" label.

Enterprise Tier

Ready to scale up your projects? The Enterprise tier is an enterprise-ready, secure, and scalable data science platform that empowers teams to govern data science assets, collaborate, and deploy their data science projects.

Read more about Enterprise to see if it's the right option for you and your team.

Default channels

The conda package manager searches for and installs package files from locations called channels. Conda comes "out of the box" with some hardcoded default channels, which are maintained and hosted by Anaconda. The current default channels are:

- main - https://repo.anaconda.com/pkgs/main
- r - https://repo.anaconda.com/pkgs/r
- msys2 (Windows only) - https://repo.anaconda.com/pkgs/msys2

Use of the default channels is subject to Anaconda's Terms of Service.

For more information on what channels are and how to use them, see Channels in the official conda documentation.

To view information on the default channels, as well as any defunct or archived channels, see https://repo.anaconda.com/pkgs. This page also includes links to lists of every available package per channel, organized by operating system and architecture.

R language packages for Anaconda

The R language packages are available to install with conda at http://repo.anaconda.com/pkgs/r/. You can install any of these R language packages into your current environment with the conda command `conda install <PACKAGE_NAME>`.

Note: Replace package-name with the name of the package. For example, you can install the package `r-acepack` with the command `conda install r-acepack`. Anaconda's R packages use the `r-` prefix, while CRAN packages do not.

Many Comprehensive R Archive Network (CRAN) packages are available as conda packages. Anaconda does not provide builds of the entire CRAN repository, so there are some packages in CRAN that are not available as conda packages.

Tip: You can also search for any R package if you know the name, such as `conda search <PACKAGE_NAME>`. Replace <PACKAGE_NAME> with the desired CRAN or MRAN R package name. For example, for rbokeh, you would use `conda search r-rbokeh`.

R Essentials bundle

Rather than install each R language package individually, you can get the R Essentials bundle. It includes approximately 80 of the most popular scientific packages for the R programming language.

You can install the R Essentials bundle with this command:

```
conda install r-essentials
```

More resources

- *Using R language with Anaconda*
- Latest index of R packages built by Anaconda, Inc. on repo.anaconda.com
- Latest index of R packages built by Anaconda, Inc. on Anaconda.org

Using Anaconda behind a company proxy

When using Anaconda's repositories behind a company proxy, you might encounter an HTTP and SSL error like the one below due to custom security profiles managed by your IT department.

```
CondaHTTPError: HTTP 000 CONNECTION FAILED for url https://repo.anaconda.com/pkgs/main/
↪win-64/current_repodata.jsonElapsed:
An HTTP error occurred when trying to retrieve this URL.
HTTP errors are often intermittent, and a simple retry will get you on your way.
If your current network has https://www.anaconda.com blocked, please file
a support request with your network engineering team.
ConnectTimeout(MaxRetryError("HTTPSConnectionPool(host='repo.anaconda.com', port=443):
Max retries exceeded with url: /pkgs/main/win-64/current_repodata.json
(Caused by ConnectTimeoutError(<urllib3.connection.VerifiedHTTPSConnection object
at 0x000001B79FFE3278>, 'Connection to repo.anaconda.com timed out.
(connect timeout=9.15)'))"))
```

There are three potential ways to resolve this. Start by updating the `.condarc` file before trying the other methods.

Updating the .condarc file

Anaconda recommends updating your `.condarc` file to include the `proxy_servers` key. This is the preferred method because it will affect only conda and not the system environment variables.

Read more about the .condarc file and using proxies.

For example:

```
proxy_servers:
    http: http://username:password@corp.com:8080
    https: https://username:password@corp.com:8080
```

You can see if your proxy is set by running `conda info --all`.

Updating environment variables

You can also resolve this error by updating the system environment variables. This can affect all CLI software across the whole system.

Windows

To change environment variables on Windows:

1. In the Start menu, search for "env".
2. Select "Edit Environment Variables for your account".
3. Select "Environment Variables…".
4. Press "New…".
5. Add two variables `http_proxy` and `https_proxy` both with the same value: http://proxy-XX:XXX

macOS

To change environment variables on macOS:

1. Check the current environment variable settings by running `printenv` in the terminal.
2. To check a specific environment variable, use `echo $variable_name`.
3. Temporarily change the environment variables by running `export variable_name=variable_value`. You can check if it's there by running `conda info --all`.

To change your environment variables on macOS permanently, review this guide.

Linux

To change environment variables on Linux:

1. Run `export variable_name=variable_value`.
2. To output the value of the environment variable from the shell, run `echo $variable_name`.

Read more about unsetting, listing, and persisting environment variables.

Using `.netrc` authentication

A `.netrc` file is an alternate way to accomplish the same goal of setting the `*_PROXY` environment variables or configuring things only for conda in the `.condarc` file. The risk in this approach is that changing the environment variables here will affect the system settings as a whole.

Read more about the .netrc file.

Security best practices

Anaconda maintains the following security and provenance/chain-of-custody practices:

- The engineers whose purpose is to build and maintain the Anaconda Distribution have curated the packages contained within based on their relevance to the data science community. These open-source packages are vetted for their widespread adoption and community support, which allows any security vulnerabilities to be addressed quickly and completely in a transparent manner.
- Source code and built artifacts are maintained with strict chain-of-control and are built, scanned, and hashed on a separate secure network within Anaconda. Only a small number of developers and IT team members have access to this network and the associated servers.
- All versions of the Anaconda Distribution and all packages that are made available at https://repo.anaconda.com/ have published SHA256 checksums. Anaconda recommends you *verify your install*.
- A Quality Assurance team performs exhaustive testing on each release of Anaconda and Miniconda, including all installers and packages. This includes the use of multiple commercial anti-malware products, as well as custom in-house security tools, for all supported operating systems - Windows, macOS, and Linux. When there are issues, they are followed up on for remediation or noted in the documentation.
- Anaconda maintains a team of IT leaders that works with software engineers to monitor all active security events through various channels of information, which results in fast response times and, whenever necessary, direct communication to our customers through Customer Support.
- Developers use controlled machines with the latest security patches.
- Especially security-minded customers may implement the functionality of the Anaconda Repository as part of an Enterprise tier subscription to only allow a small set of packages to come onto their site at their control and block all others from entering their network. Due to the open-source nature of the enclosed packages, they may perform advanced code reviews or other associated activities to ensure their desired level of risk management and/or compliance.

2.18.6 Anaconda Navigator

The Desktop Portal to Data Science

Anaconda Navigator is a desktop graphical user interface (GUI) included in Anaconda® Distribution that allows you to launch applications and manage conda packages, environments, and channels without using command line interface (CLI) commands. Navigator can search for packages on Anaconda.org or in a local Anaconda Repository. It is available for Windows, macOS, and Linux.

The Navigator documentation includes the following:

Installing Navigator

This topic explains how to install or uninstall Anaconda Navigator.

System requirements

Navigator supports the same operating systems as Anaconda Distribution. These include:

- Windows 10 x86_64 or later
- macOS 10.14+, 64-bit
- Ubuntu 18+/Centos7+, 64-bit

The most current installation of Navigator also supports Python versions 3.9+.

Installing Navigator

Navigator is automatically installed when you install *Anaconda Distribution* version 4.0.0 or later.

If you have *Miniconda* or Anaconda Distribution version 4.0.0 or older installed, install Navigator manually:

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Run the following command:

```
conda install anaconda-navigator
```

For more information on using Navigator, see the *Getting started* section of this documentation.

Using Navigator with a network firewall?

To use Navigator in online mode, you must be able to reach the following sites:

- https://repo.anaconda.com for repositories and installers
- https://anaconda.org for conda-forge and other channels on anaconda.org
- google-public-dns-a.google.com (8.8.8.8:53) to check internet connectivity with Google Public DNS

If necessary, add these URLs to an allowlist in your network's firewall settings.

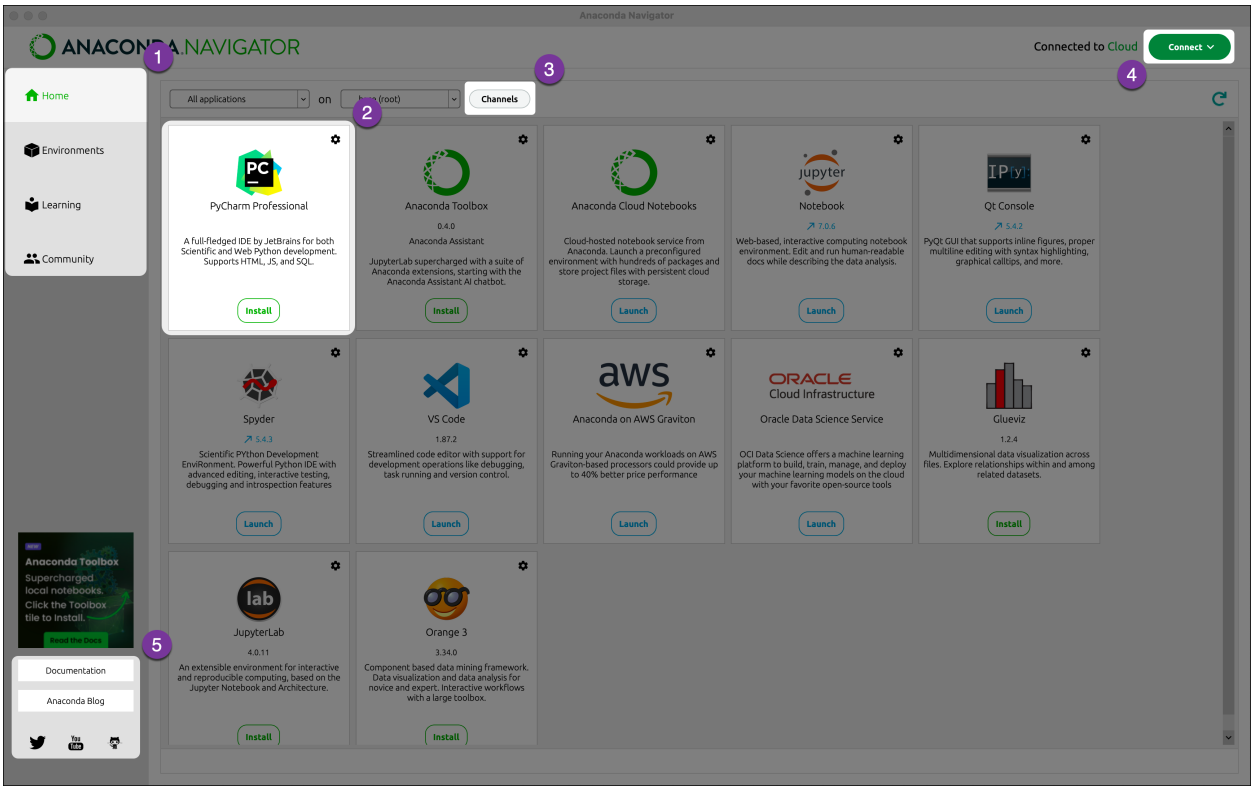
For more information on offline mode, see *Enabling offline mode*.

Other relevant pages

- *Getting Started with Navigator*
- *Connecting Navigator to Anaconda Cloud*
- *Connecting Navigator to other repositories*
- *Uninstalling Navigator*

Overview

This page describes the basic parts of Anaconda Navigator.



1. **Navigator pages**
   Access the main pages of the Navigator application. The Home page is open by default. For more information on the contents of each page, see *Navigator pages*.

2. **Application/package tile**
   Install or launch popular graphical Python applications that work well with Navigator.

3. **Channels**
   Manage the channels Navigator can use to source and install packages.

4. **Connect**
   Connect to Anaconda Cloud or any of the free or subscription repositories Anaconda provides. Signing into a repository service will enable searching for packages within that repository.

5. **Outside links**
   Visit Anaconda's documentation, blog, and social media.

Home page

The **Home** page is open by default when Navigator starts. **Home** displays all of the available applications that you can manage with Navigator.

The first time you open Navigator, the following popular graphical Python applications are already installed or are available to install:

Available applications

- *Anaconda AI Navigator*
- *Anaconda Cloud Notebooks*
- *Anaconda Toolbox*
- EduBlocks
- Glueviz multidimensional data visualization
- IBM watsonx
- JupyterLab
- Jupyter Notebook
- OCI (Oracle Cloud Infrastructure) Data Science
- Orange data visualization
- PyCharm
- PythonAnywhere
- PyScript
- Qt Console
- RStudio IDE
- Spyder IDE
- VS Code IDE

You can also *build your own Navigator applications*.

Working with application tiles

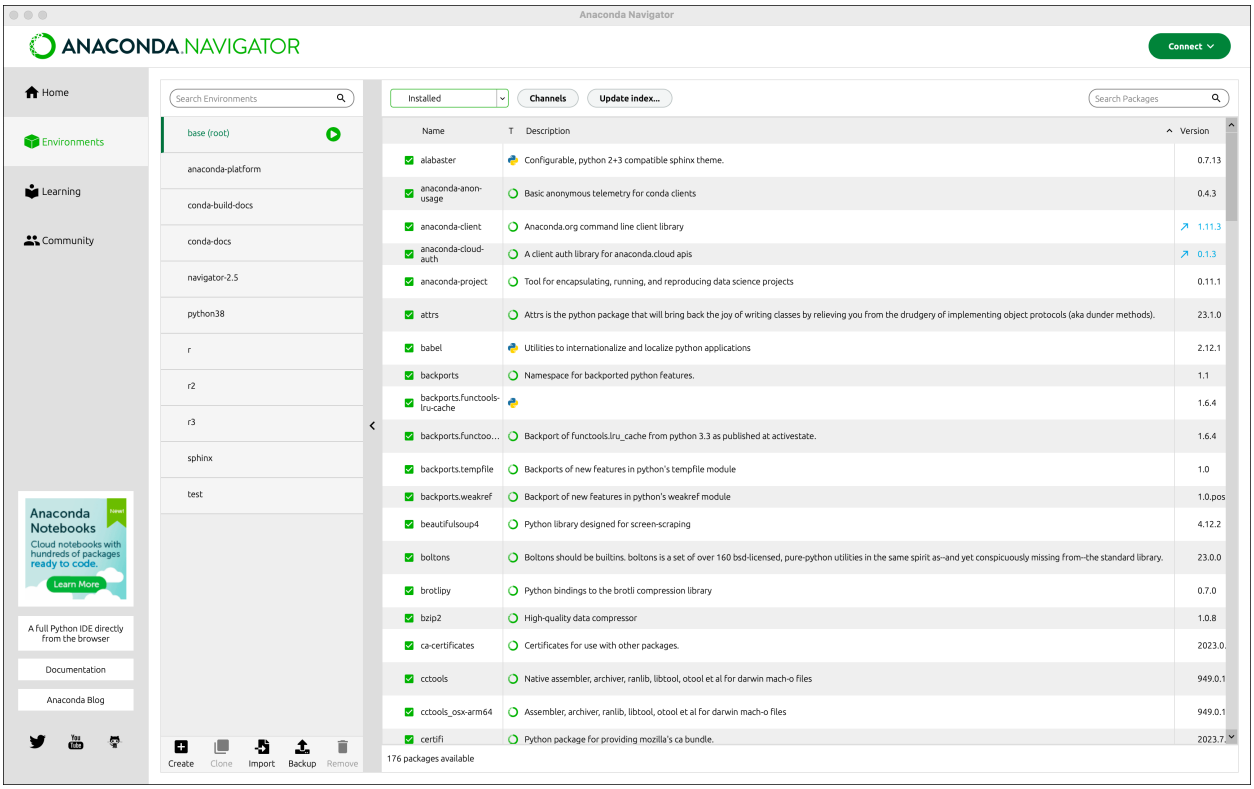
In each application tile, you can:

- Launch the application–Click its **Launch** button.
- Install an application–Click its **Install** button.
- Update, remove, or install a specific version of an application–Click the gear icon in the top-right corner of the application tile.

Applications are installed in the active environment, which is displayed in the **Applications on** list. To install an application in a specific environment, first select the environment from the list, then click the **Install** button on the application's tile.

Environments page

The **Environments** page allows you to manage installed *environments*, *packages*, and *channels*.



The left column lists your environments. Click an environment to activate it.

Environments

With Navigator, like with conda, you can create, export, list, remove, and update environments that have different versions of Python and/or other packages installed. Switching or moving between environments is called activating the environment. Only one environment is active at any point in time. For more information, see *Managing environments*.

Packages

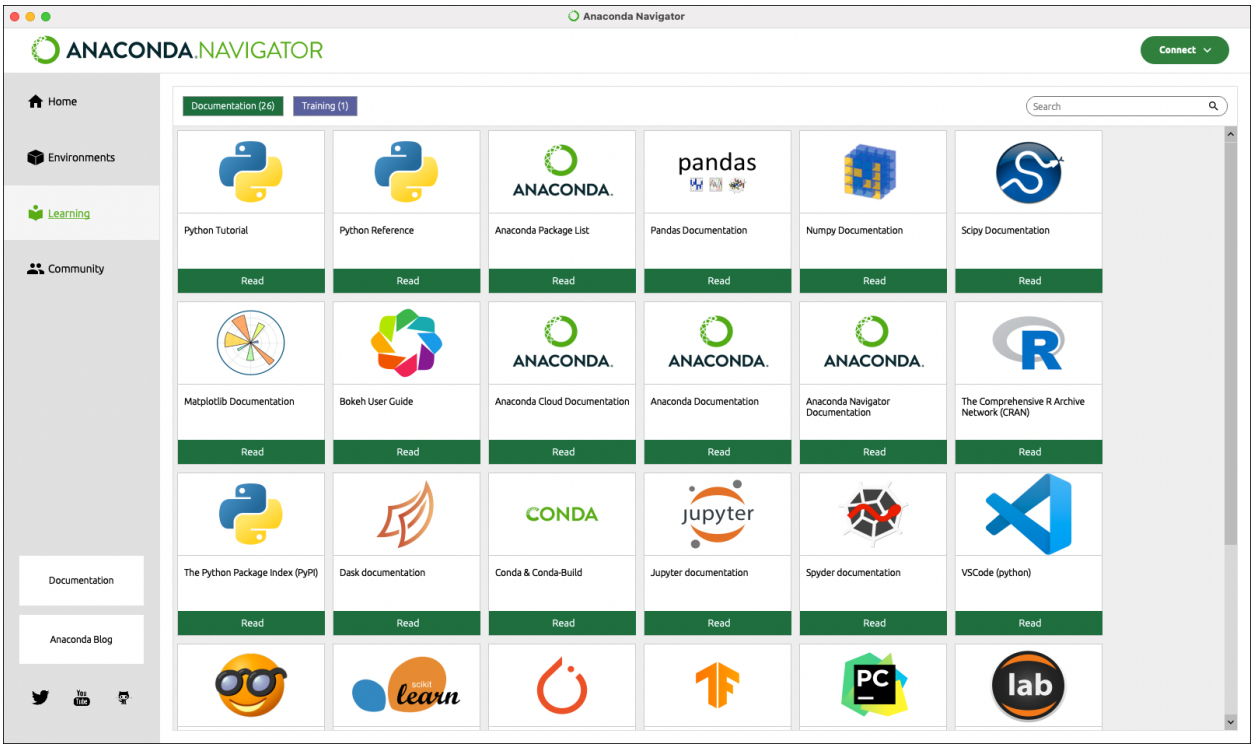
The right column lists packages installed in the currently-activated environment. The default view is Installed packages. To change which packages are displayed, click the arrow beside the list, then select from Installed, Not Installed, Updatable, Selected, or All packages. For more information, see *Managing packages*.

Channels

Channels are locations where Navigator or conda looks for packages. Click **Channels** to modify which channels Navigator uses. For more information, see *Managing channels*.

Learning page

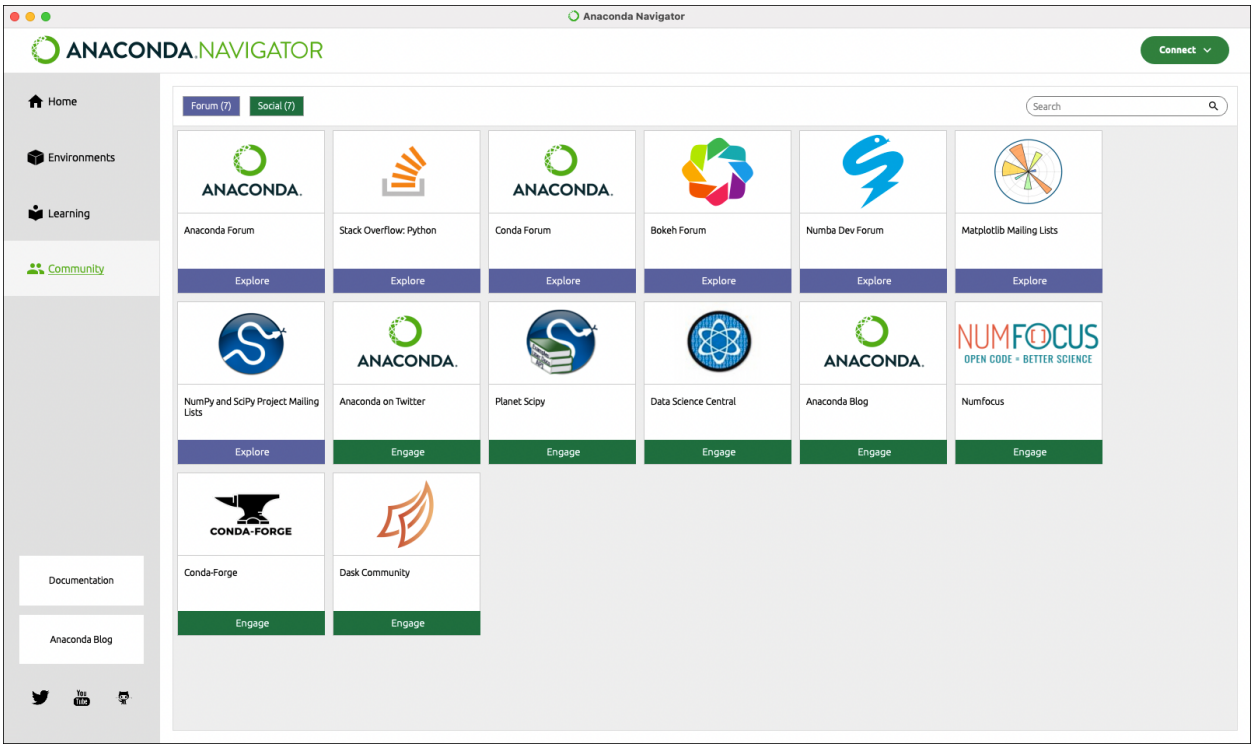
On the **Learning** page, you can learn more about Navigator, the Anaconda platform, and open data science. Click **Documentation** or **Training** to filter the learning tiles visible to you. Click any tile to open it in a browser window.



Community page

On the **Community** page, you can learn more about support forums and social networking relating to Navigator. Click **Forum** or **Social** to filter the community tiles visible to you. Click any tile to open it in a browser window.

Tip: To get help with Anaconda and Navigator from the community, join the Anaconda community.



Related documentation

- *Navigator preferences*
- *Reviewing Navigator's logs*
- *Enabling offline mode*

Getting started with Navigator

Anaconda Navigator is a desktop application that is built on top of the conda package and environment manager. Navigator enables you to use conda to manage environments and packages, but in a graphical application instead of a command line interface (CLI).

This short guide takes you through the basic steps of using Navigator.

Note: Conda's getting started guide goes through some of these same instructions while using the conda CLI.

Before you start

You should have already *installed Anaconda Distribution*, which contains the Navigator application.

Starting Navigator

Navigator starts by default when Anaconda Distribution is first installed. If you have installed Anaconda Distribution before, open Navigator using the following instructions:

Windows

From the Start menu, search for "Anaconda Navigator" and click to open.

MacOS

Open Launchpad, then click the Anaconda-Navigator icon.

Linux

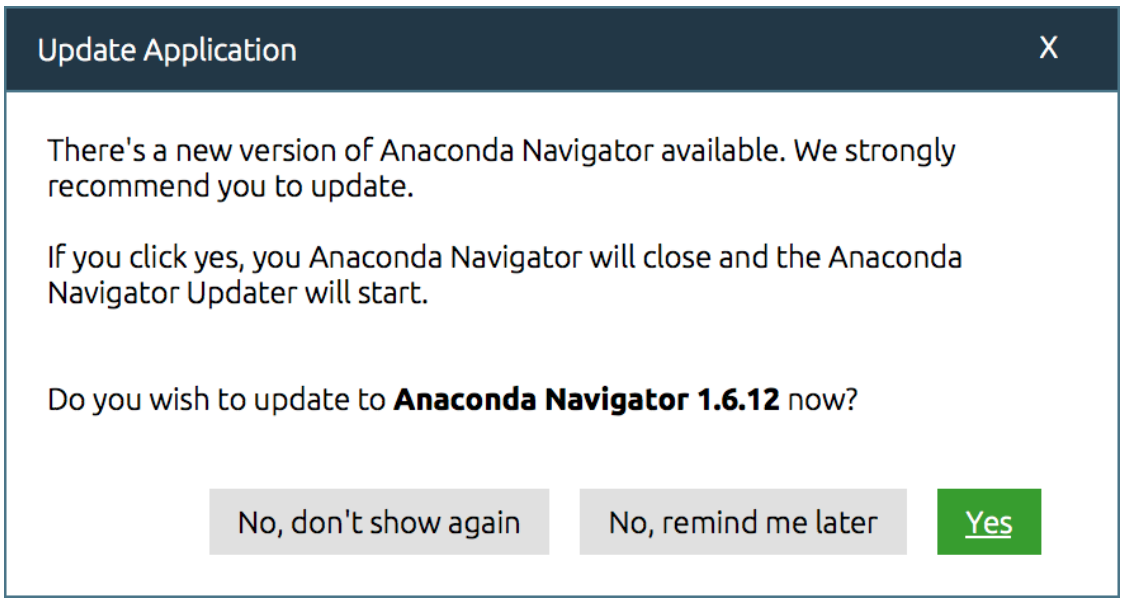
1. Open a terminal window.
2. Open Navigator by using the following command:

```
anaconda-navigator
```

Managing Navigator

Note: When Navigator opens, it verifies that Anaconda is installed. If Navigator does not start up properly, see the *Troubleshooting* page.

When you start Navigator, it automatically checks for a new version. If Navigator finds a new version, you will see a dialog box like this:

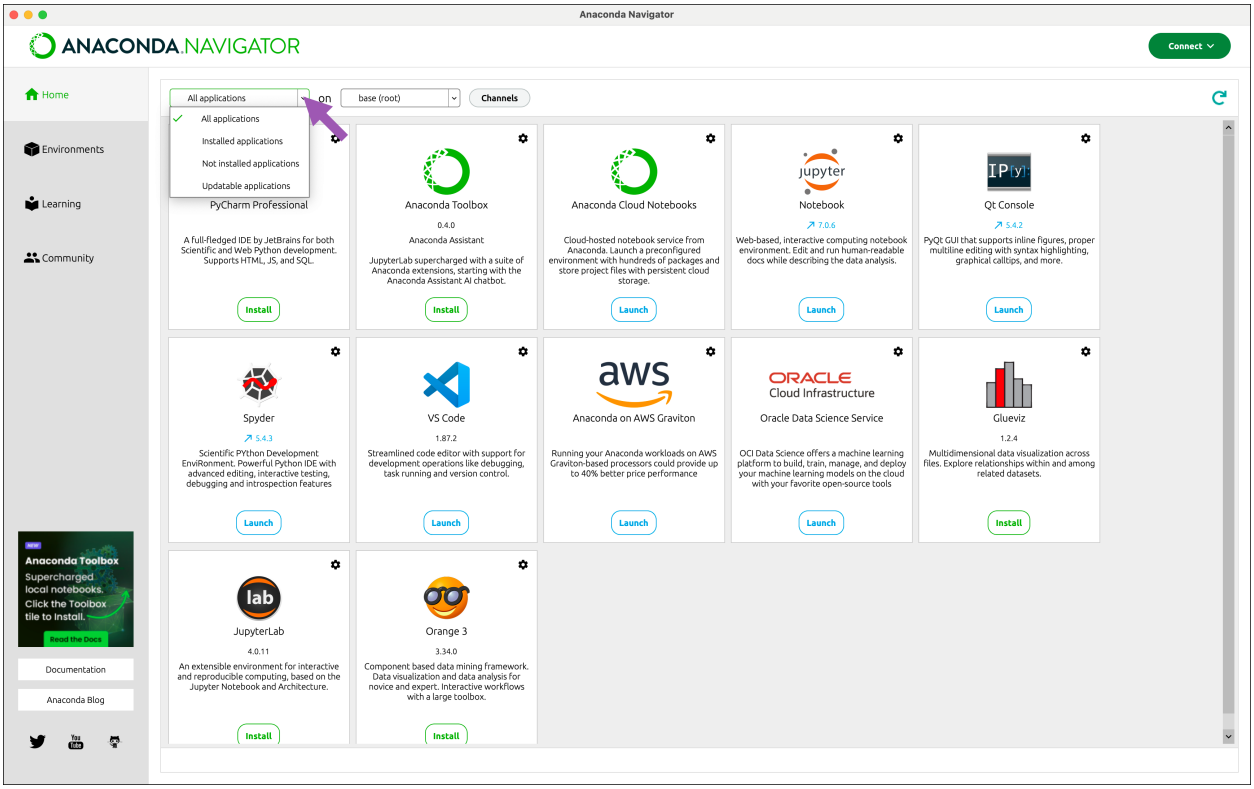


Click **Yes** to update Navigator to the current version.

Tip: Anaconda recommends keeping Navigator updated to the latest version.

Managing application tiles

By default, all application tiles available to launch or install within Navigator are displayed on the Home page. Filter the application tiles with the applications dropdown menu.



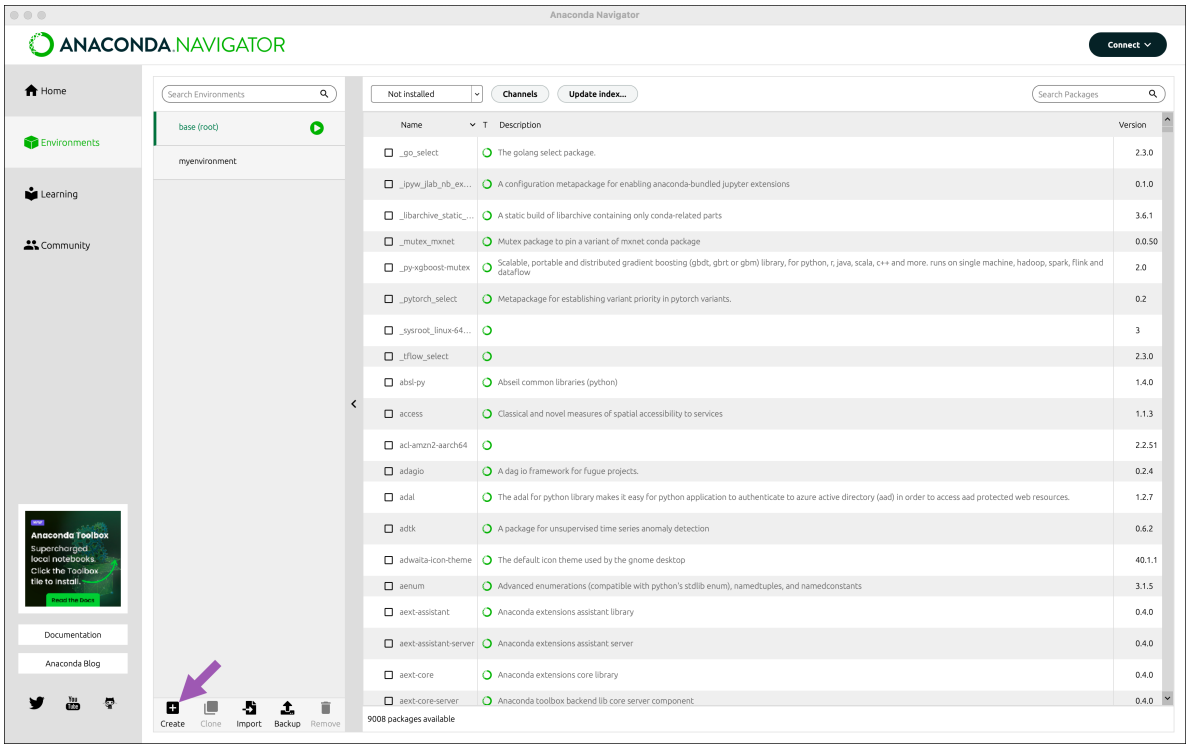
The dropdown contains filters for all applications, applications that are installed on your computer, applications that are not installed, and applications that have an update available.

Managing environments

Navigator uses the conda package and environment manager to create conda environments. Conda environments are directories within your file system that contain a specific collection of packages and package dependencies. Environments are isolated from one another and enable you to quickly switch between projects with drastically different needs.

In this example, we will create a new environment named `myenvironment`:

1. On the **Environments** page, click **Create**.



2. In the **Environment** name field, type a descriptive name for your environment.
3. Click **Create**. Navigator creates the new environment and activates it.
4. Now you have two environments: the default environment `base (root)` and `myenvironment`.

> **Caution:** Anaconda does not recommend working in your base environment.

5. Switch between environments by clicking the name of the environment you want to use. This will deactivate the first environment and activate the environment you just selected.

> **Tip:** The active environment is the one with the arrow beside its name.

For more documentation on environments, see *Managing environments* in the Tutorials section.

Managing Python

When you create a new environment, Navigator installs Python 3.11 by default. To use a different version of Python in a given environment:

- specify when you create the environment
- change the Python package version in an existing environment

Changing the Python version when creating an environment

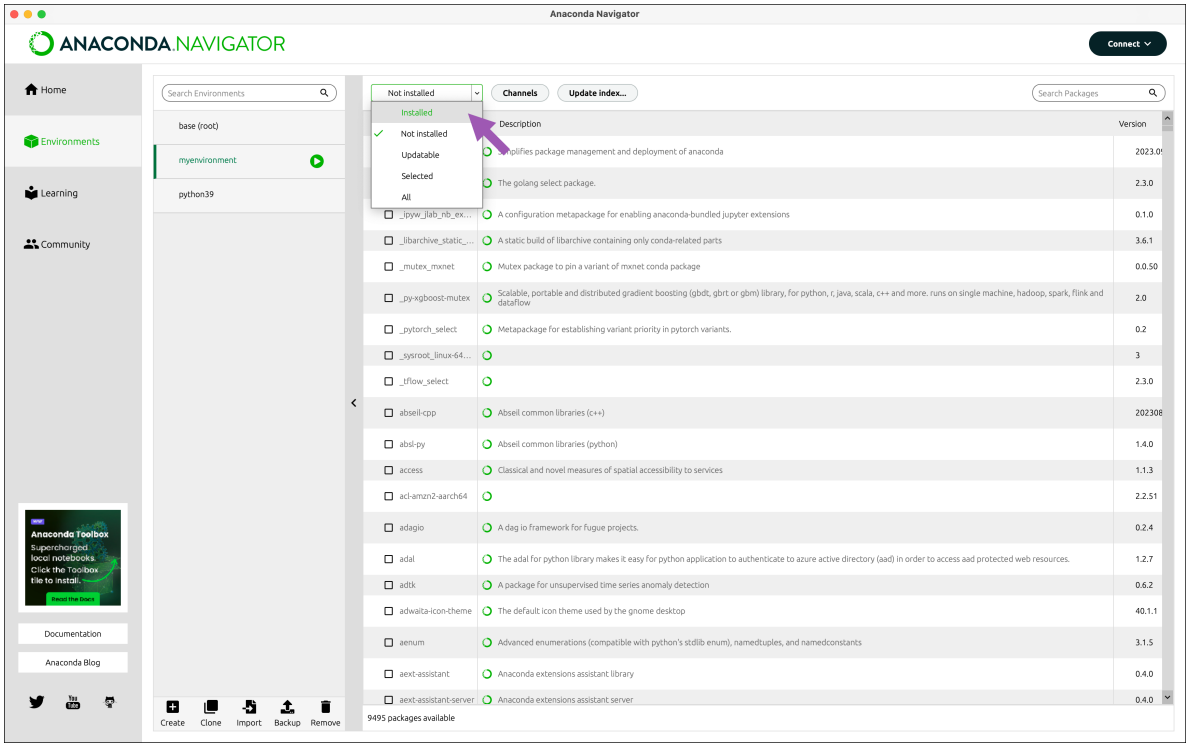
In this example, we will create a new environment named `python39` that contains Python 3.9.18:

1. On the **Environments** page, click **Create**.
2. In the **Environment name** field, type the descriptive name "python39".
3. Select *3.9.18* from the **Python** dropdown.
4. Click **Create**.

Changing the Python version in an existing environment

In this example, we will change the Python version of `myenvironment` to Python 3.12.0:

1. On the **Environments** page, select `myenvironment` (which we created in the *Managing environments* section above) from the environment list to activate it.
2. Select *Installed* from the package filter dropdown.



3. Select the Python package checkbox and hover over *Mark for specific version installation*.
4. Select *3.12.0* from the dropdown that appears.
5. Click **Apply**.
6. A dialog listing all the packages that will be modified appears. Click **Apply**.

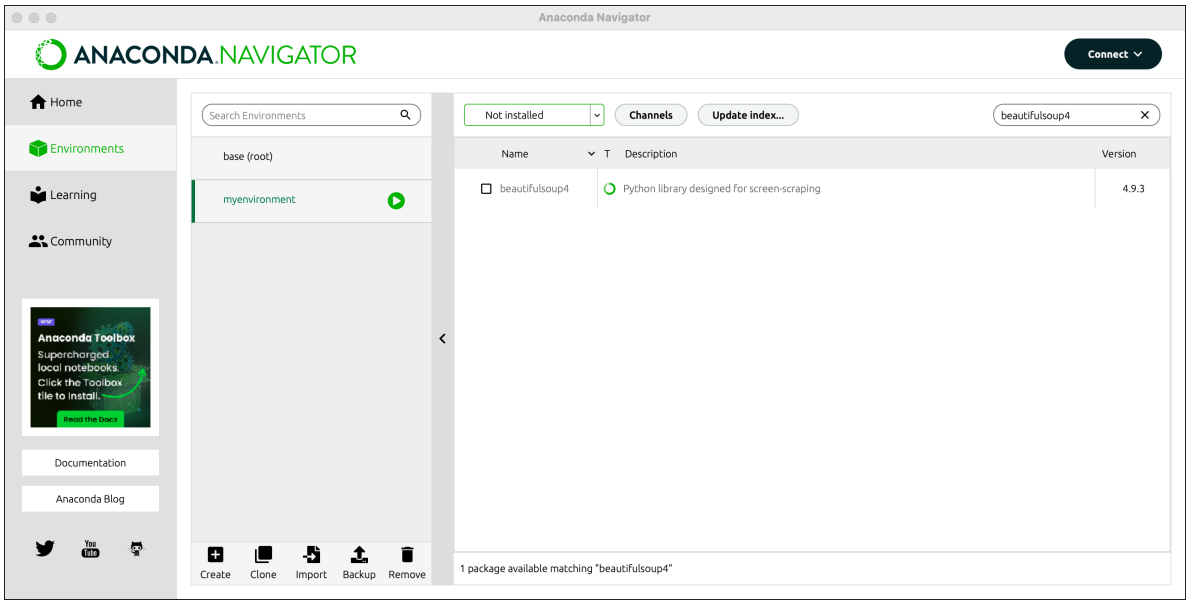
Managing packages

On the **Environments** page, you can:

- View which packages are in each environment
- Search for and install new packages
- Upgrade existing packages
- Delete packages

In this example, we will install a package called `beautifulsoup4` into `myenvironment`.

1. On the **Environments** page, select `myenvironment` from the environment list to activate it.
2. Open the package filter dropdown and select *Not installed* to view a list of packages that are available to install from the channels you are connected to.
3. Type "beautifulsoup4" into the **Search packages** box.



4. Select the checkbox beside `beautifulsoup4` in the package list.
5. Click **Apply**.
6. A dialog appears that lists all packages that will be installed. Click **Apply**.
7. Open the package filter dropdown and select *Installed*.

The newly-installed `beautifulsoup4` package is now displayed in the list of installed programs in the current environment.

For more documentation on packages, see *Managing packages* in the Tutorials section.

Managing channels

By default, Navigator searches in and installs packages from Anaconda's free public repositories, also known as `defaults`. This contains the package repositories `main`, `r`, and `msys2` (Windows only), which are hosted at repo.anaconda.com/pkgs/. There are many more package channels available, hosted on Anaconda.org, in Anaconda Cloud, or in an on-premises server, if your organization hosts their own packages via Anaconda Server.

In this example, we will add a channel connection to conda-forge in Navigator's channel manager.

1. Click **Channels**.
2. Click **Add…**.
3. Enter "conda-forge" into the textbox that appears.
4. Press Enter (Windows)/Return (Mac) on your keyboard.
5. Click **Update channels**.

Your package search within Navigator will now also include packages available via conda-forge.

For more documentation on channels, see *Managing channels* in the Tutorials section.

More information

- Community support
- Paid support options
- Learning resources

Navigator preferences

The Navigator Preferences dialog contains configuration settings for Navigator. This page defines each option in the Preferences dialog.

To open Preferences:

Windows/Linux

Open the **File** menu and click *Preferences*.

macOS

Open the **Anaconda Navigator** or **python** menu and click *Preferences*.

Preference definitions

Anaconda.org API domain
The API endpoint used to connect to channels and install packages from Anaconda.org. This endpoint, `https://api.anaconda.org`, is filled in by default.

Note: You must verify your Anaconda.org email address to connect Navigator to Anaconda.org.

Anaconda Server API domain
The API endpoint used to connect to channels and install packages from your instance of Anaconda Server.

Enterprise 4 Repository API domain
The API endpoint used to connect to channels and install packages from your Repo 4 server.

Enable SSL verification
Enable or disable SSL verification. SSL verification is enabled by default.

> **Caution:** Disabling SSL verification is not recommended for security reasons.

SSL certificate path
The path to an SSL certificate that can be used to verify SSL connections. (Optional)

Default conda environment
Select an environment to open by default when starting Navigator. Your `base` environment is selected by default.

Quality improvement reporting
Choose to provide personally non-identifiable information to help improve Navigator. This reporting is enabled by default.

Enable offline mode
Enable or disable offline mode. Offline mode is disabled by default. For more information on offline mode, see *Enabling offline mode*.

Enable dark mode
Enable or disable a darker theme for Navigator.

Hide offline mode dialog
Hide or show the **Offline Mode** announcement dialog when offline mode is enabled. This can be forced by selecting **Enable offline mode** or can occur when Navigator detects that internet access is unavailable. This dialog is hidden by default.

Hide quit dialog
Hide or show the dialog that appears when exiting Navigator. This dialog appears by default.

Hide update dialog on startup
Hide or show the **Update Application** dialog that appears when Navigator detects a new version is available. This dialog appears by default.

Hide running applications dialog
Hide or show the **Close running applications** dialog that appears when you attempt to close Navigator with applications running. This dialog prompts you to select any running applications you want to close along with Navigator.

Enable high DPI scaling
Enable or disable high DPI scaling. This option can be useful if Navigator isn't displaying correctly on some high DPI screens. High DPI scaling is disabled by default.

Show application startup error messages
Hide or show any error messages that occur when starting Navigator. These error messages appear by default, if any errors occur.

Show hidden Anaconda Server channels
Hide or show all available channels on a connected Anaconda Server instance. Only your Anaconda Server account channels are visible by default.

PyCharm Community path
Set the PyCharm Community Edition path if it was not installed in the default location.

PyCharm Professional path
Set the PyCharm Pro path if it was not installed in the default location.

VS Code path
Set the Visual Studio Code path if it was not installed in the default location.

Configure Navigator
Make changes to the Navigator configuration file (`anaconda-navigator.ini`).

Configure Conda
Make change to the conda configuration file (`.condarc`).

> **Caution:** Be careful when changing values directly in the configuration files for Navigator or conda. Incorrect configuration can cause issues with these products.

Reset to defaults
Click to reset all preferences to defaults.

Cancel
Click to cancel any changes.

Apply
Click to apply any changes.

Related documentation

- *Editing Navigator and conda configuration files*

Tutorials

General tasks:

How to search anaconda.org

To search anaconda.org for packages using *Anaconda Navigator*:

If necessary, sign into Anaconda.org.

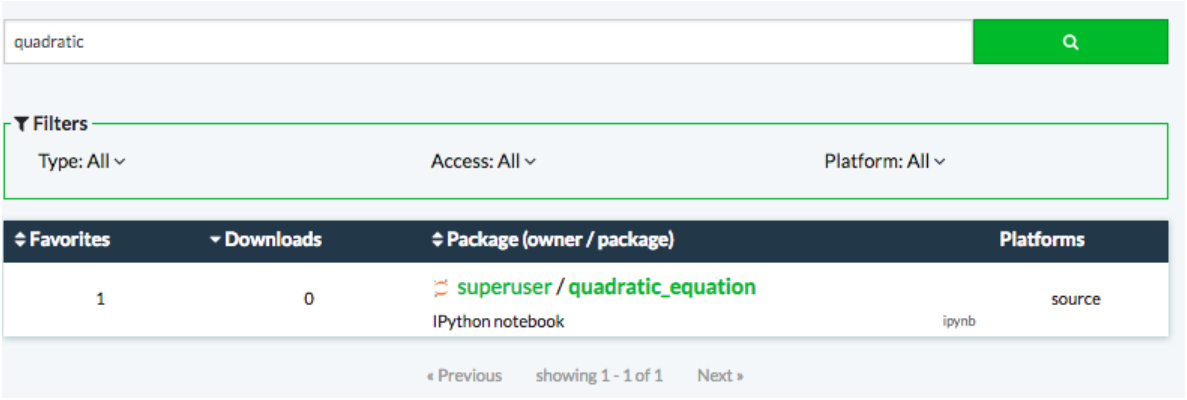
1. Click **Connect**.
2. Click **Sign in** beside Anaconda.org.

   If you don't yet have an account, you can create one here.

   Note: You must verify your Anaconda.org email to use Navigator while connected to Anaconda.org.

3. Enter your Anaconda.org credentials.
4. Click **Sign In**.

1. Open the **Environments** page.
2. In the package list filter dropdown, select *All* to search all packages on anaconda.org.
3. In the **Search Packages** field, type the name of the package you want to search for on anaconda.org.



All packages containing the characters typed into **Search Packages** will appear in the package list below.

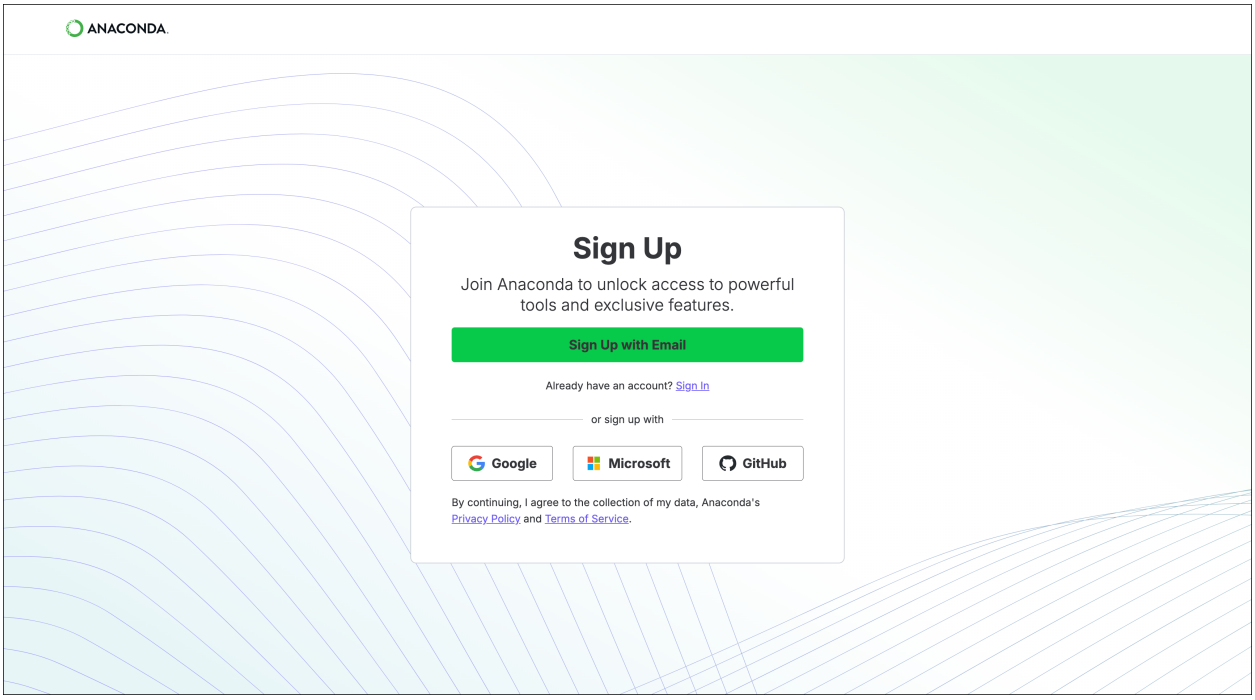
For more information on installing and using the packages you find on Anaconda.org, see *Package installation for Anaconda*.

Connecting Navigator to Anaconda Cloud

A free Anaconda Cloud account gives you access to cloud backups for your environments and access to Anaconda's cloud notebooks and free learning resources.

Creating an account

Go to https://anaconda.cloud/sign-up.



From here you have several options for account registration:

- Sign up manually with an email and password
- Authenticate with a GitHub, Gmail, or Microsoft account

Signing up manually

1. Click **Sign Up with Email**.
2. Enter your name, email address, and password.
3. Check your email for the verification email.
4. Click the verification link in your email to complete account verification.

Connecting Anaconda Cloud to Navigator

Once you have become an Anaconda Cloud member, from Navigator. To connect Navigator to Anaconda Cloud:

1. At the top of the Navigator window, click **Connect**.
2. In the **Connect** dropdown, click **Sign in** by Anaconda Cloud.
3. Enter the email address and password associated with your Anaconda Cloud account or connect via a GitHub, Google, or Microsoft account.
4. Click **Sign in**.

Connecting Navigator to other repositories

Note:

- Business (Cloud) has recently been renamed to Package Security Manager (Cloud).
- Anaconda Server (Business On-Prem) has recently been renamed to Package Security Manager (On-prem).

Navigator integrates with Anaconda's free, public repository and premium, curated repository through different connection points. For more information, see our pricing page.

Note: You can only be signed into one repository service at a time. However, you can be signed into Anaconda Cloud while also signed into a repository service.

How to connect to other repositories

This guide takes you through the connection setup for Package Security Manager (Cloud and On-prem) and Anaconda Enterprise 4:

PSM (Cloud)

Note: The Anaconda Professional sign in is used for both Anaconda Professional and Package Security Manager (Cloud) connections.

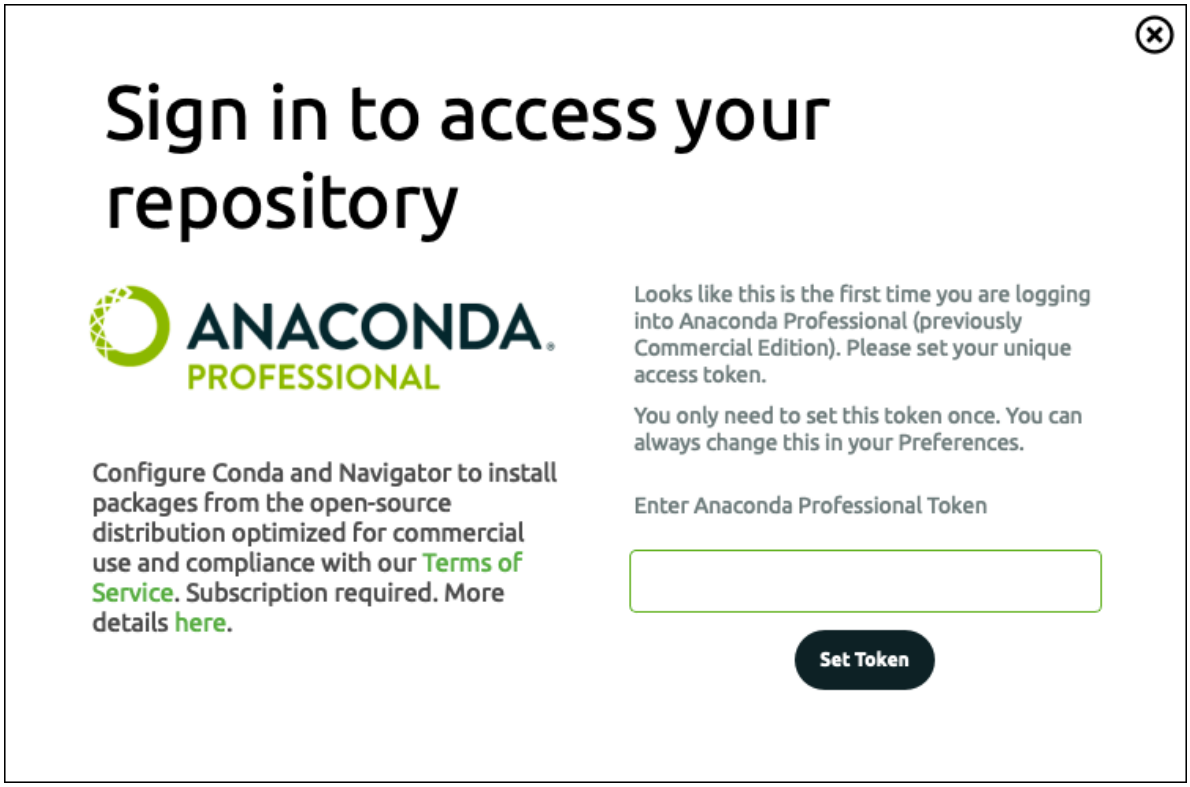
1. Click **Connect** in the top-right corner of the Navigator application.
2. **Sign in** to *Anaconda Professional*.
3. Enter your token to log in to your Pro/Package Security Manager instance.

Where is my token?

You can issue yourself a *private* access token from the **Token Access** page of your Anaconda Cloud organization. You must be assigned a seat to issue yourself a token. If you've lost your token, you can re-issue yourself a new token at any time. Re-issuing a token invalidates the previous token.

For more information, see *Authenticating to Anaconda* in the Package Security Manager (Cloud) quickstart.

4. Click **Set Token**. If your token is valid, you will be signed in.

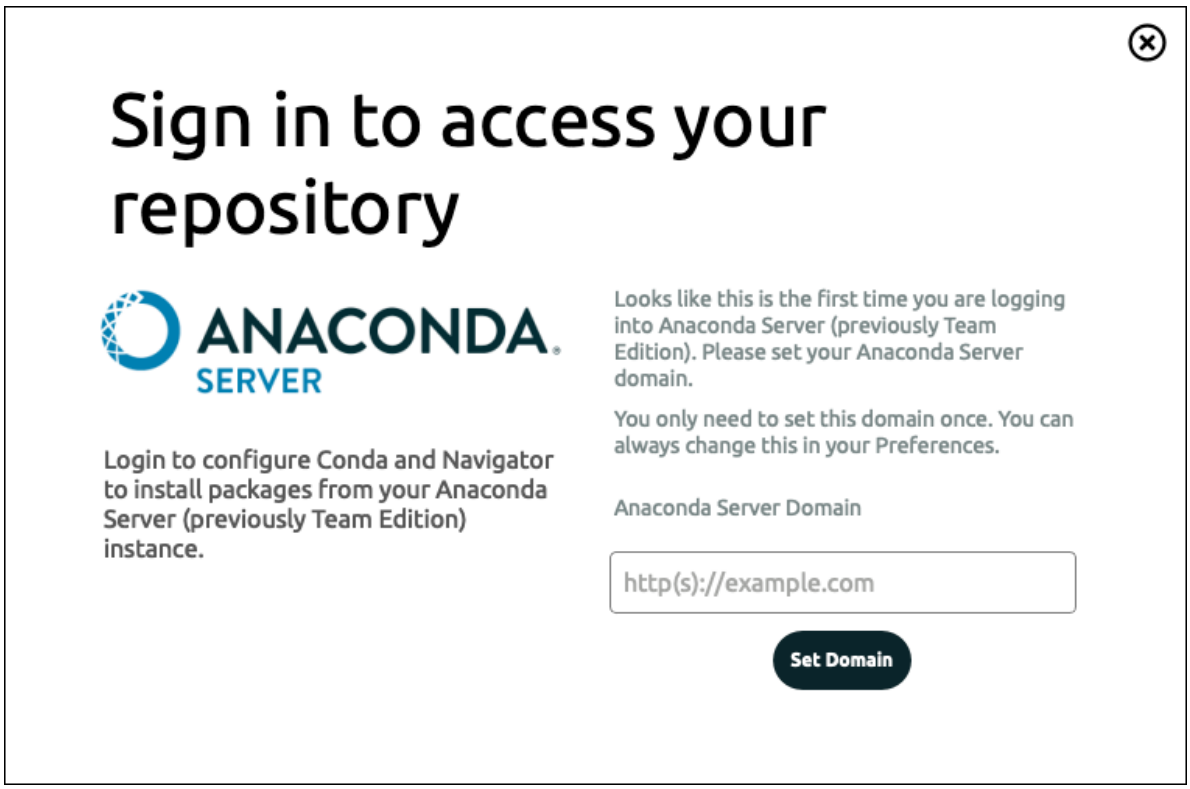


Note: For more information on adding channels from your Package Security Manager (Cloud) repo to Navigator, see *Adding an organization channel to your .condarc file* in the Package Security Manager (Cloud) documentation.

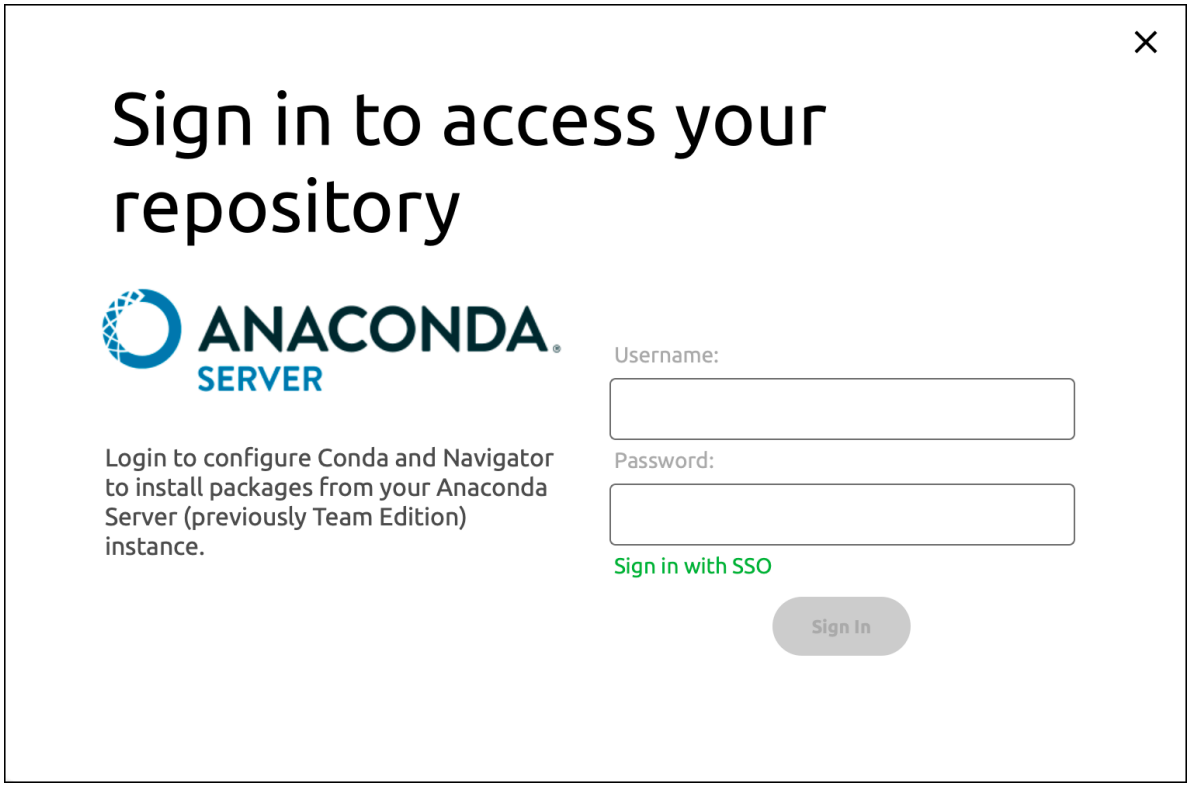
PSM (On-prem)

Note: The Anaconda Server sign in is the connection for Package Security Manager (On-prem).

1. Click **Connect** in the top-right corner of the Navigator application.
2. **Sign in** to *Anaconda Server*.
3. If this is your first time logging in, enter your Anaconda Server domain and click **Set Domain**.



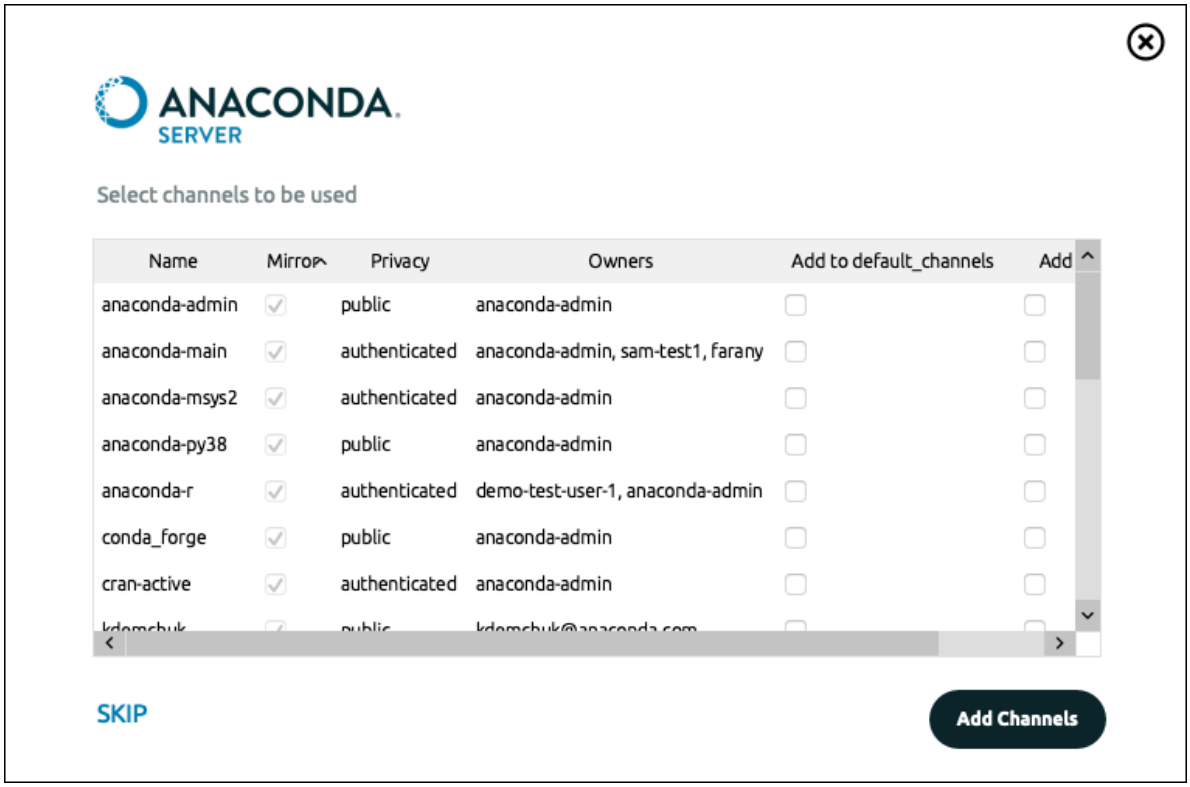
4. Enter the credentials you use to log in to your Anaconda Server instance.
5. Click **Login**. If all credentials are correct, you will be signed in.



(Optional) Add channels from your Server instance to Navigator

After signing in, select channels from the repository integration to use with Navigator.

1. Select **Add to channels** to add each channel to the `channels:` list in your `.condarc` file.
2. Select **Add to default_channels** to add each channel to your default channels.
3. Click **Add channels** to save your selections.

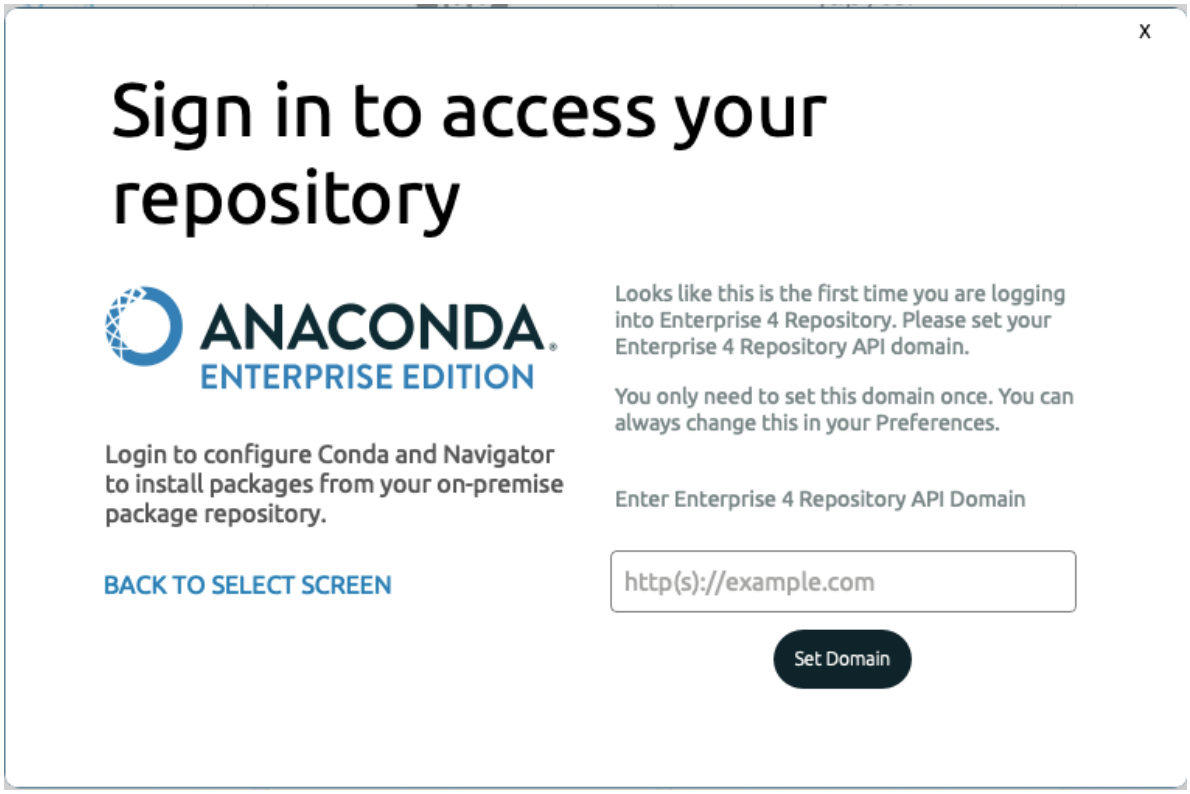


Note: The Anaconda Server connection also has a **Sign in with SSO** option. For more information on setting up an SSO connection for Package Security Manager (On-prem) using Okta, see Okta integration using OIDC.

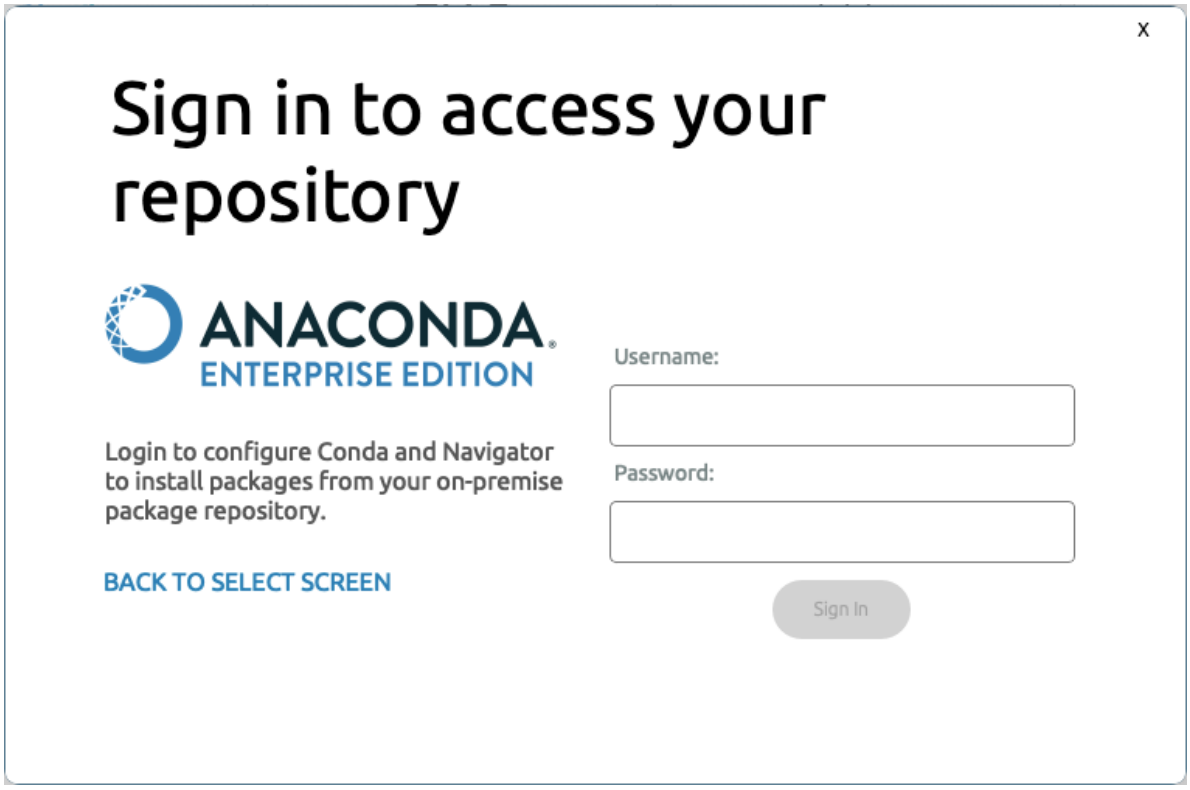
AE4

1. Click **Connect** in the top right corner of the Navigator application.
2. **Sign in** to *Enterprise 4 Repository*.
3. If this is your first time logging in, enter your Enterprise 4 domain and click **Set Domain**.

> **Caution:** The domain must be a full path without a trailing slash. For example: `http(s)://enterprise-mysite.com`



4. Enter the credentials you use to log in to your Enterprise 4 platform.
5. Click **Login**. If all credentials are correct, you will be signed in.



6. A message appears asking you to manually add channels to Navigator.

What happens when you connect to a repository

Navigator performs a few actions for you automatically when you connect to your repository:

Pro/Package Security Manager

- The `conda-token` tool sets your supplied organization token and automatically manages `default_channels`.

Server

- The `conda-repo-cli` tool creates a private token for you.
- Navigator sets the private token in the Navigator config file (`anaconda-navigator.ini`) file. See *Anaconda Server token authentication*.
- Navigator modifies the conda configuration file (`.condarc`):
  - `channels` is set to an empty list
  - `default_channels`, if present, is removed
- Navigator asks you to manage your channels and default channels.

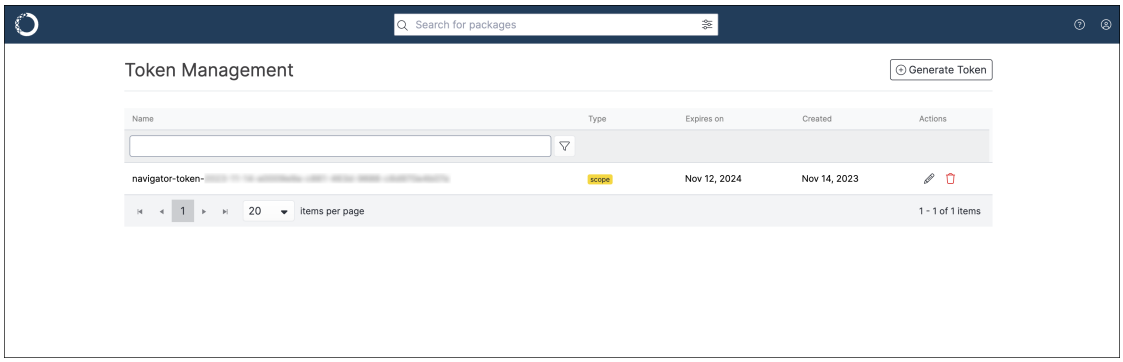
Enterprise 4

- Navigator uses a private token managed by `anaconda-client` to log in.
- Navigator modifies the conda configuration file (`.condarc`):
  - `channels` is set to an empty list so you can set appropriate channels
  - `default_channels`, if present, is removed

Note: If you have already logged in to your repository using a CLI, Navigator detects that when it opens and shows a connection to that repository automatically. If you log out from your repository connection in Navigator, your CLI session is also affected accordingly.

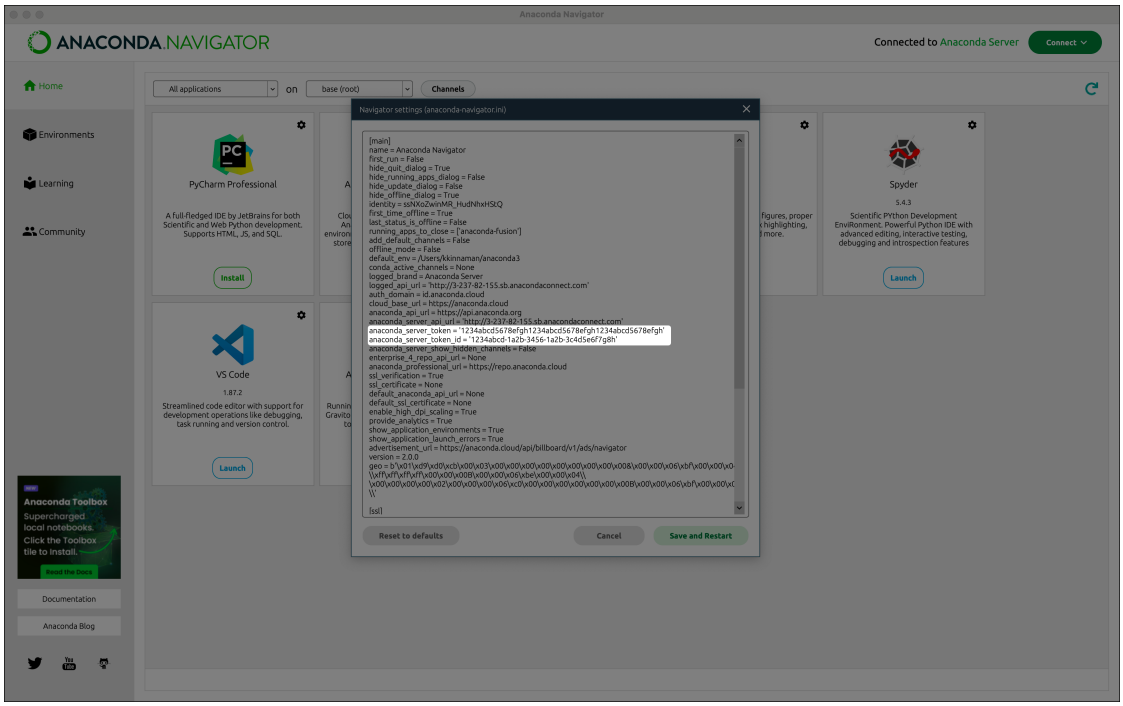
Anaconda Server token authentication

Your access token for Anaconda Server provides you with the ability to access your own private server channel. The access token is stored locally, which gives conda native access to your remote channel and packages.



Note: To use other's private channels in Anaconda Server, see Setting/using a token in the Anaconda Server documentation.

The variables `anaconda_server_token` and `anaconda_server_token_id` in the Navigator config file (`anaconda-navigator.ini`) are also updated when you first connect to Anaconda Server. This is mostly system data to help Navigator integrate with Anaconda Server.



Caution: The token and token ID config variable names have been updated from `team_edition_token` to `anaconda_server_token` and `team _edition_token_id` to `anaconda_server_token_id` as of Version 2.4.0. If you downgrade your Navigator application to a version older than 2.3.0, you will need to manually change these variable names back to their older versions within your `anaconda-navigator.ini` file.

Changing the repository connection domain

When you first connect Navigator to a Server or Anaconda Enterprise 4 repository, you enter a domain URL before your login credentials. To change this domain:

Anaconda Server

1. Go to **Preferences**.
2. In **Anaconda Server API domain**, enter a valid domain name.

   Note: The domain must be a full path without a trailing slash. For example: `http(s)://mysite.com`

3. Click **Apply** to save your changes.

Anaconda Enterprise 4

1. Go to **Preferences**.
2. In **Enterprise 4 Repository API domain**, enter a valid domain name.

   Note: The domain must be a full path without a trailing slash. For example: `http(s)://mysite.com`

3. Click **Apply** to save your changes.

How to disconnect from a repository

You can only be connected to one repository at a time.

To disconnect from a repository:

1. Click **Connect**.
2. Click **Sign out** beside the repository you are signing out of.

Channels that you have added to Navigator from Anaconda.org or a professional (repo.anaconda.cloud) repository are not automatically removed when you disconnect from those repositories. Navigator will still search those channels and install packages from them. If you no longer want those channels to be searched:

1. Open **Preferences** from the **File**, **Anaconda Navigator**, or **python** menus, depending on your setup.
2. Click **Configure Conda**.
3. Delete any channels in the `channels:` list that you no longer want to be connected to. Anaconda recommends against deleting `defaults`.

   For example, let's say you have disconnected from a Package Security Manager repository and have the following `channels:` list:

```
channels:
  - https://repo.anaconda.cloud/t/<TOKEN>/repo/business-org-name/channel1
  - https://repo.anaconda.cloud/t/<TOKEN>/repo/business-org-name/channel2
  - defaults
```

You would delete the first two lines and leave `defaults` in your `channels:` list.

```
channels:
  - defaults
```

4. Click **Save and Restart**.

What happens when you disconnect from a repository

Navigator performs a few actions for you automatically when you disconnect from your repository:

Pro/Business

- The `conda-token` tool removes your supplied organization token.

Server

- Navigator removes the access token created for you by `conda-repo-cli`.
- Navigator sets `logged_api_url`, `anaconda_server_token`, and `anaconda_server_token_id` to `None` in the Navigator config file (`anaconda-navigator.ini`).
- The conda configuration file (`.condarc`) returns to the state it was in before the login. (Navigator saves a copy of the `.condarc` file before a login is attempted.)

Enterprise 4

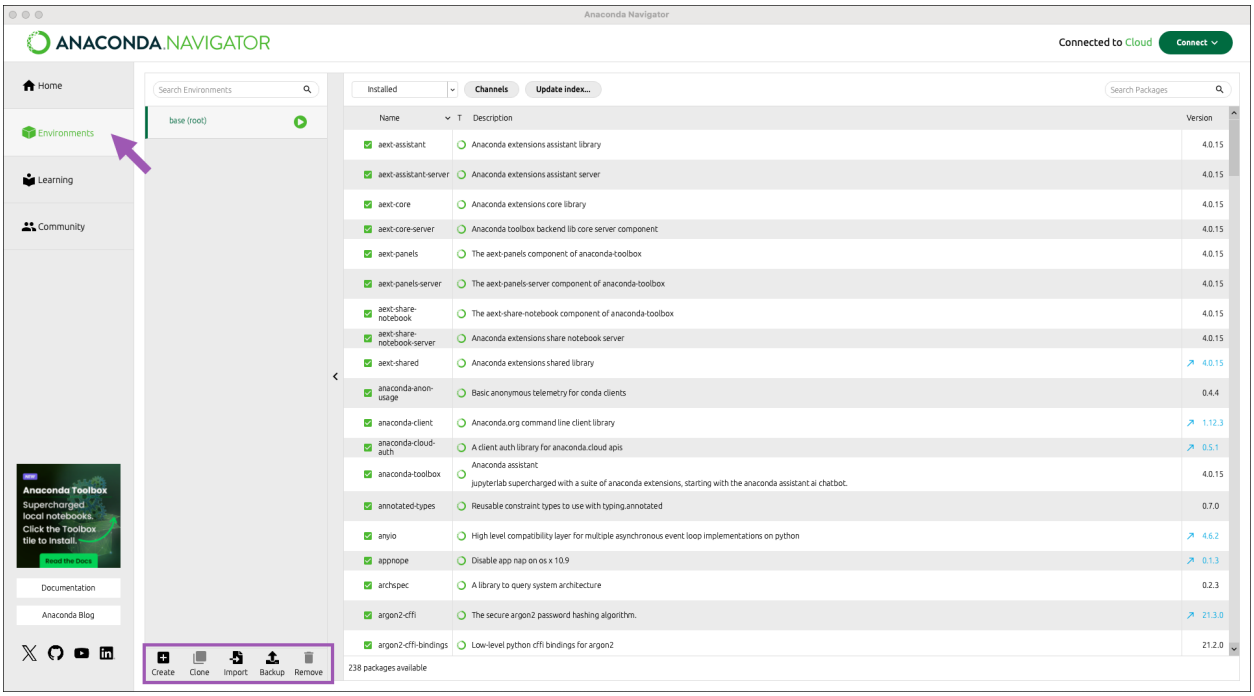
- Navigator uses a private token managed by `anaconda-client` to log out.
- The conda configuration file (`.condarc`) returns to the state it was in before the login. (Navigator saves a copy of the `.condarc` file before a login is attempted.)

Troubleshooting

If you are having issues logging in to Anaconda Server or know you're logged in but cannot interact with Anaconda Server, see *Trouble logging in to the Anaconda Server connection in Navigator*.

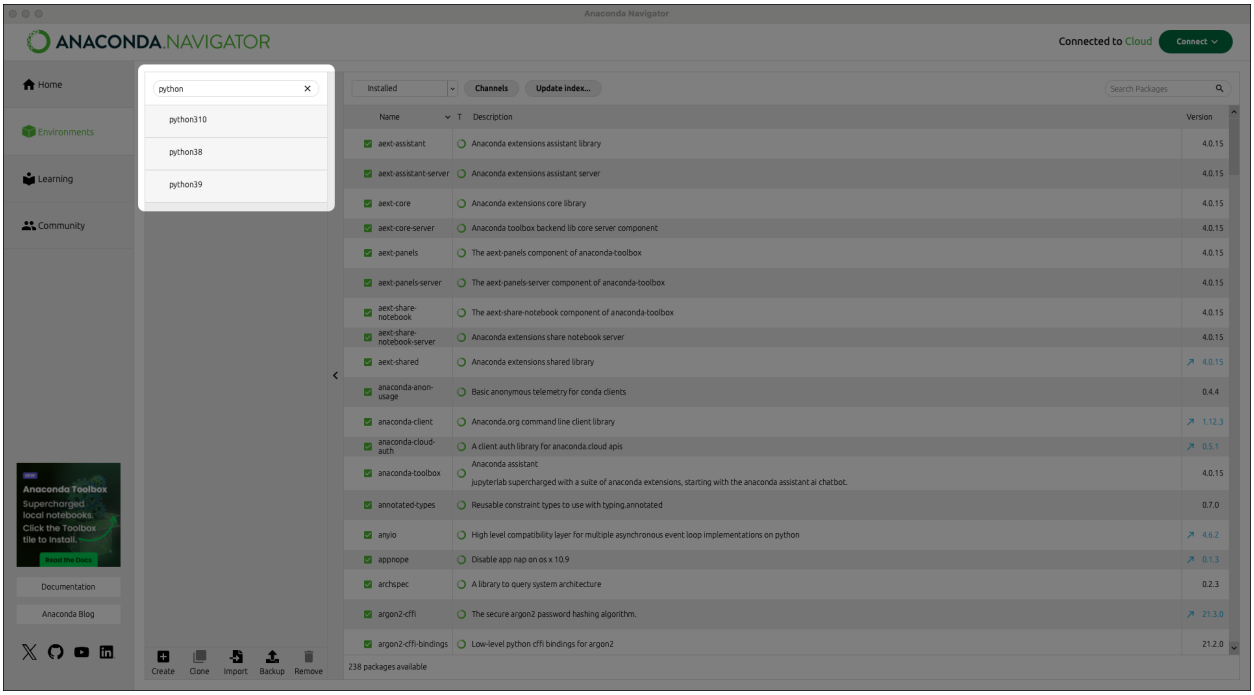
Managing environments

On the **Environments** page, the left column displays your environments. At the bottom of the environments list are the **Create**, **Clone**, **Import**, **Backup**, and **Remove** buttons.



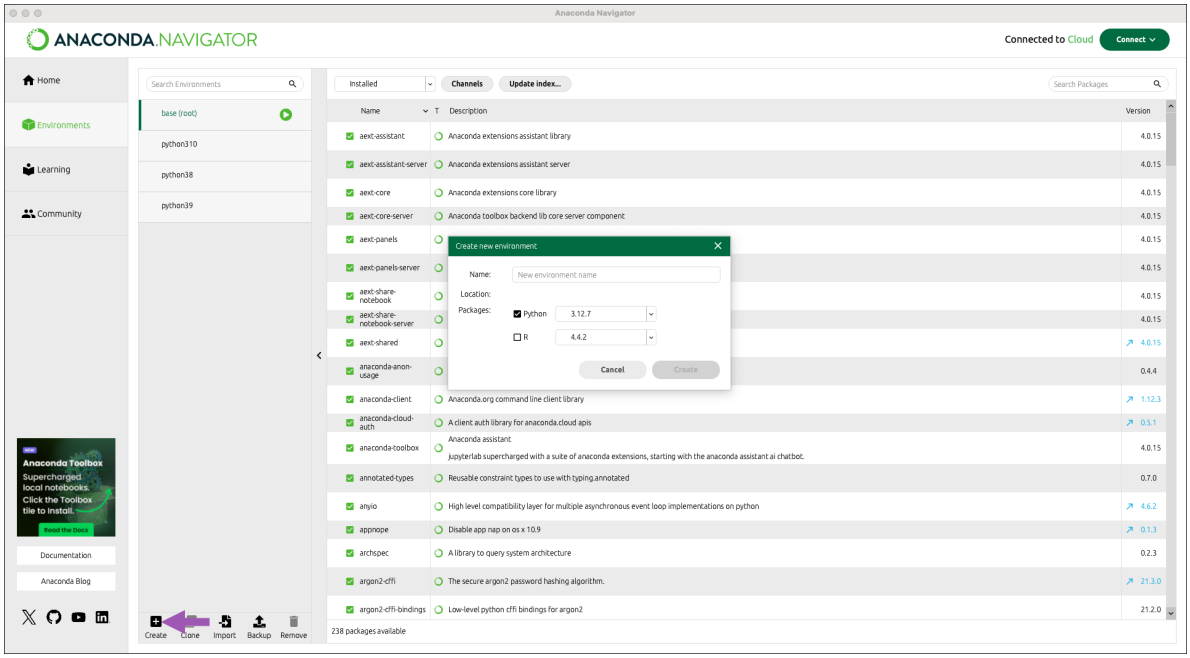
Searching for an environment

In the **Search Environments** box, enter all or part of an environment name to filter the environment list.



Creating a new environment

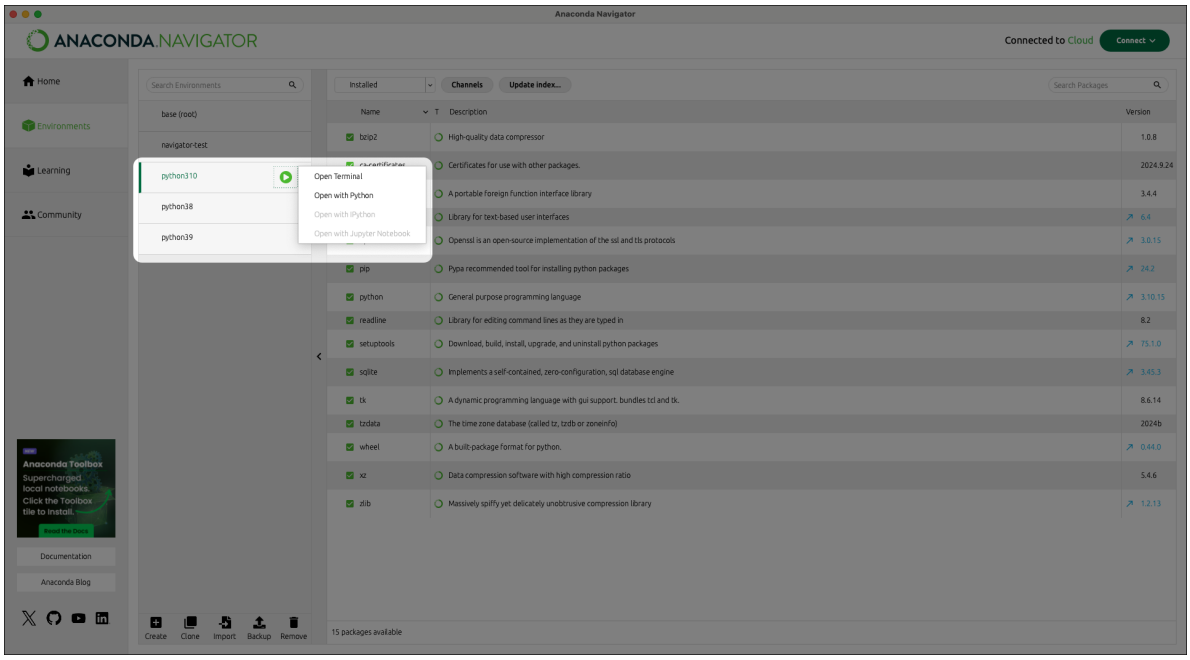
1. At the bottom of the environments list, select **Create**.
2. In the Create new environment dialog, enter a descriptive name for the new environment.



3. Select Python or R to set the package type for your environment.
4. Select a version for your Python or R installation.
5. Click **Create**.

Using an environment

1. In the environments list, select the environment name to activate it.
2. Click the arrow button beside the environment name to open the activation options dropdown.



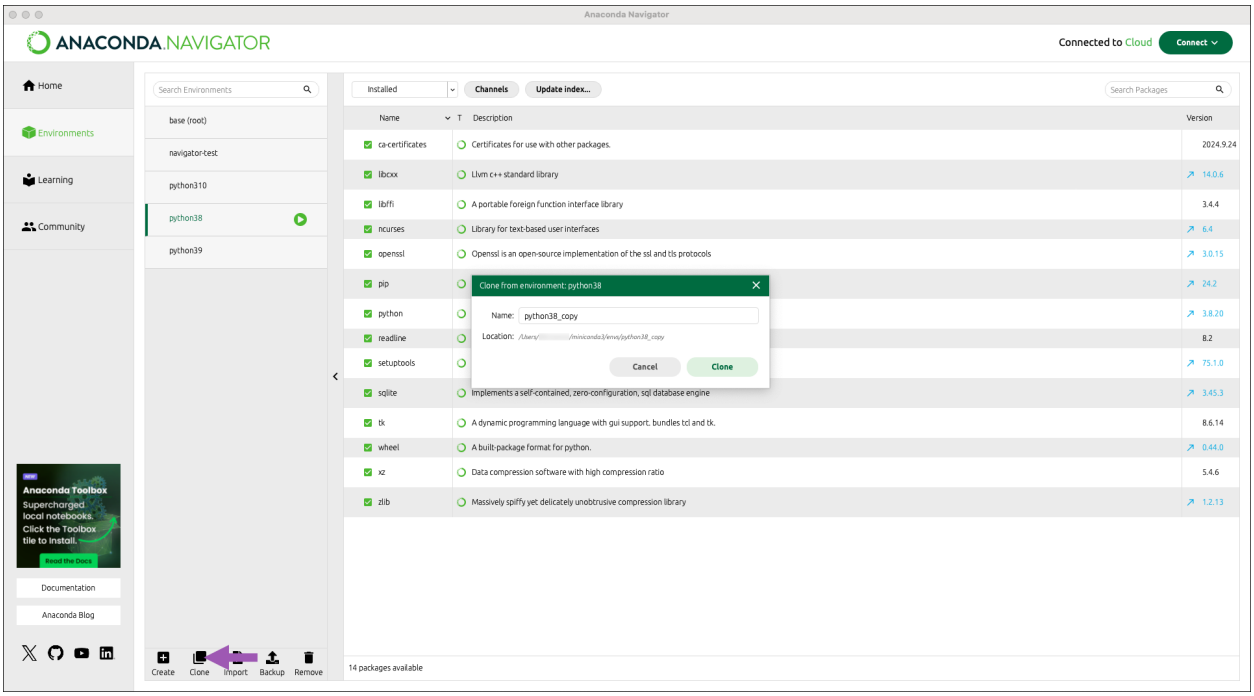
3. Select one of the following options for opening the environment: Terminal, Python interpreter, IPython Console, or Jupyter Notebook.

Note: Some of these options may not be available if they were not installed in the environment.

Cloning an environment

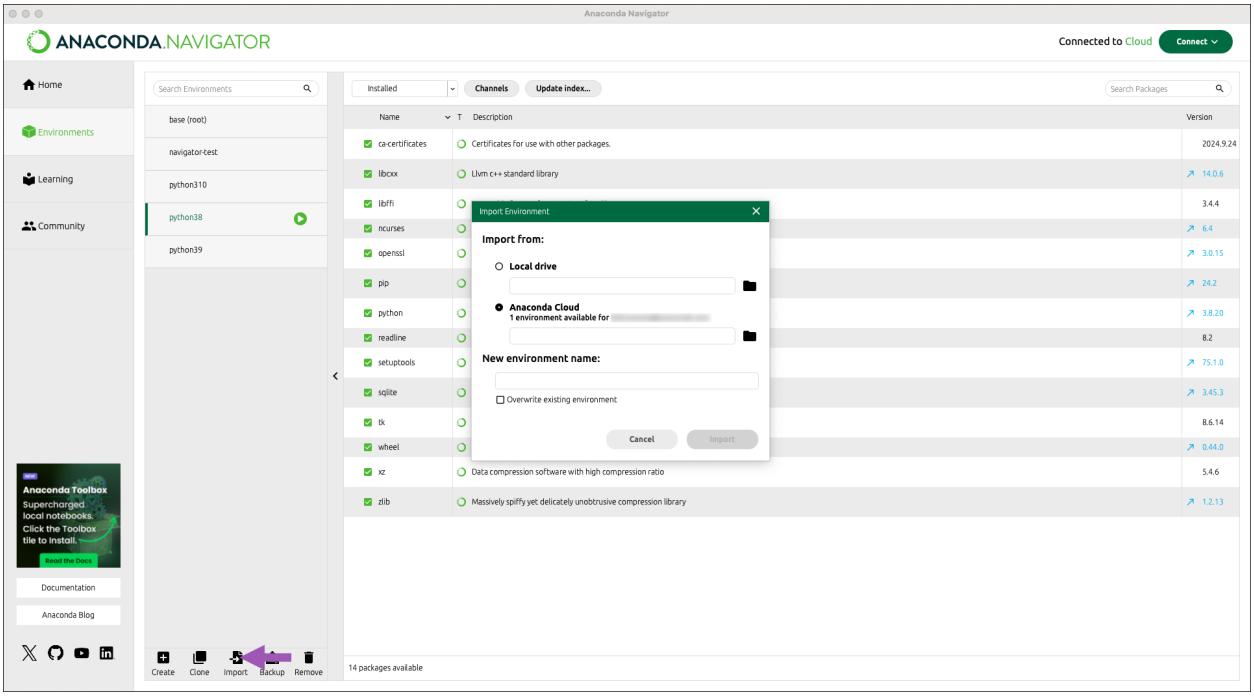
Caution: Your base environment cannot be cloned in Anaconda Navigator, nor does Anaconda recommend cloning it with an alternative method, as attempting to clone your base environment will generate an incomplete clone and might cause errors in Navigator and/or conda.

1. Activate the environment you want to clone by selecting it from the environments list.
2. At the bottom of the environments list, click **Clone**.
3. Enter a descriptive name for the new environment.
4. Click **Clone**.



Importing an environment

Environment creation information can be shared using a `.yml`-formatted configuration file. If someone has given you an environment file that you want to use—for example `shared-environment-file.yml`—and you have saved it to your computer, you can import it into Navigator. Furthermore, if you have backed up an environment either locally or to Anaconda Cloud, you can import it onto your local computer with Navigator.



Importing from a file

1. At the bottom of the environments list, select **Import**.
2. Select **Local drive**.
3. Click the folder in the **Local drive** section.
4. Select the `.yml` environment file you want to import.
5. Enter a descriptive name for the new environment, or use the existing name.

   Note: Each environment name must be unique. To overwrite an environment with the same name, select the **Overwrite existing environment** checkbox.

6. Click **Import**.

Importing from Anaconda Cloud

1. At the bottom of the environments list, select **Import**.
2. , if necessary.
3. Select **Anaconda Cloud**.
4. Click the folder in the **Anaconda Cloud** section.

   Tip: If you do not want to immediately create a new environment, click **Download environment file** and save the environment to your computer. Click **Cancel** twice to close the Import dialog when finished.

5. Select the environment you want to import.
6. Click **Select**.
7. Enter a descriptive name for the new environment, or use the existing name.

   Note: Each environment name must be unique. To overwrite an environment with the same name, select the **Overwrite existing environment** checkbox.

8. Click **Import**.

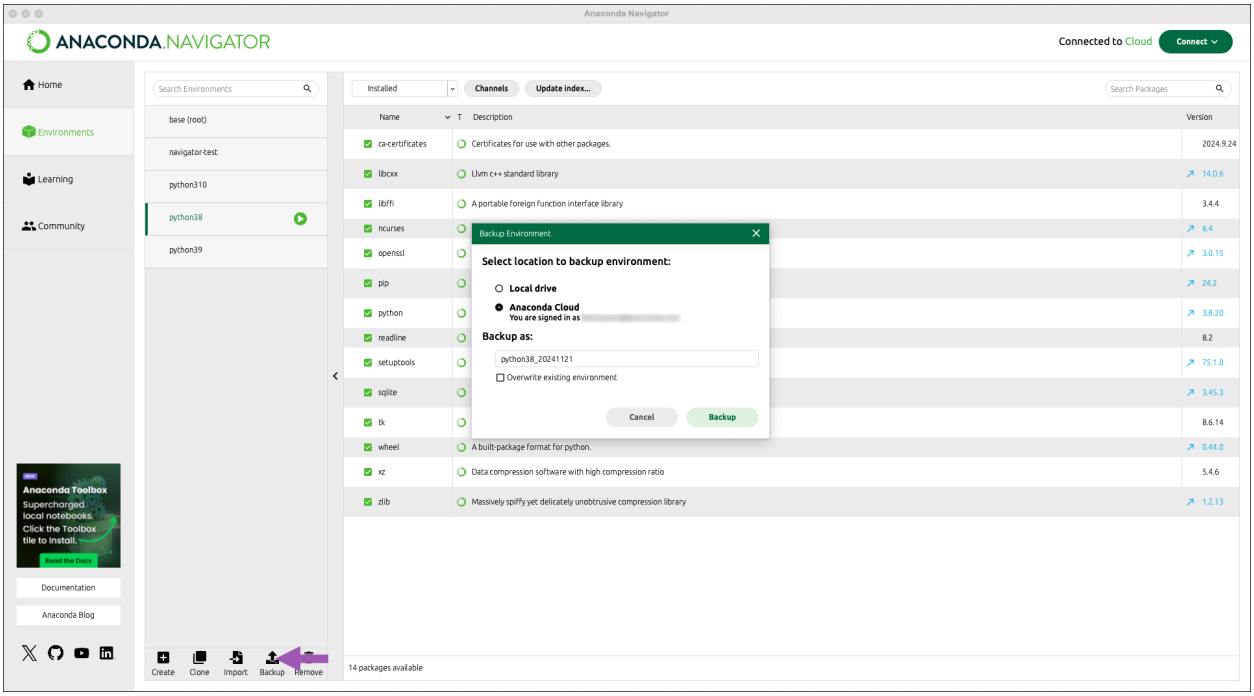
Your newly imported environment appears in the environments list.

Backing up an environment

Backing up your environment to Anaconda Cloud protects it from hard drive failure and machine malfunctions, while local backups are valuable for rolling back conda to a previous state.

Warning: Don't delete your environment backup when uninstalling and reinstalling Anaconda Distribution or Miniconda. If you do, you will not be able to import your existing environments into your new installation.

Activate the environment you want to back up by selecting it from the environments list. Then follow the instructions below to back up to a local file or to Anaconda Cloud.



Backing up locally

1. At the bottom of the environments list, click **Backup**.
2. Select **Local drive**.
3. Click **Backup**.
4. Enter a descriptive name for your environment's `.yml` file.

   Note: Each environment name must be unique.

5. Choose a place on your computer to save it.
6. Click **Save**.

Backing up to Anaconda Cloud

Note: You need an Anaconda Cloud account to back up your environment to Anaconda Cloud.

1. At the bottom of the environments list, click **Backup**.
2. Select **Anaconda Cloud**.
3. Enter a descriptive name for the backup. By default, the environment name and current date is entered as the backup name.

Note: Each environment name must be unique. To overwrite an environment with the same name, check **Overwrite existing environment**.

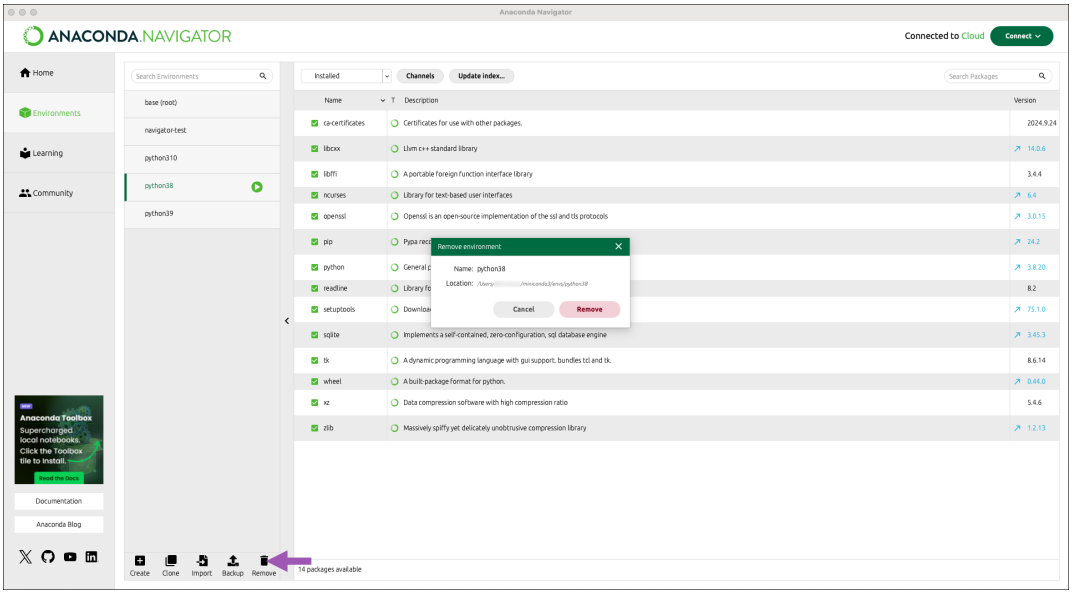
4. Click **Backup**.

Removing an environment

Navigator

1. In the environments list, select the environment you want to remove.
2. At the bottom of the list, click **Remove**.

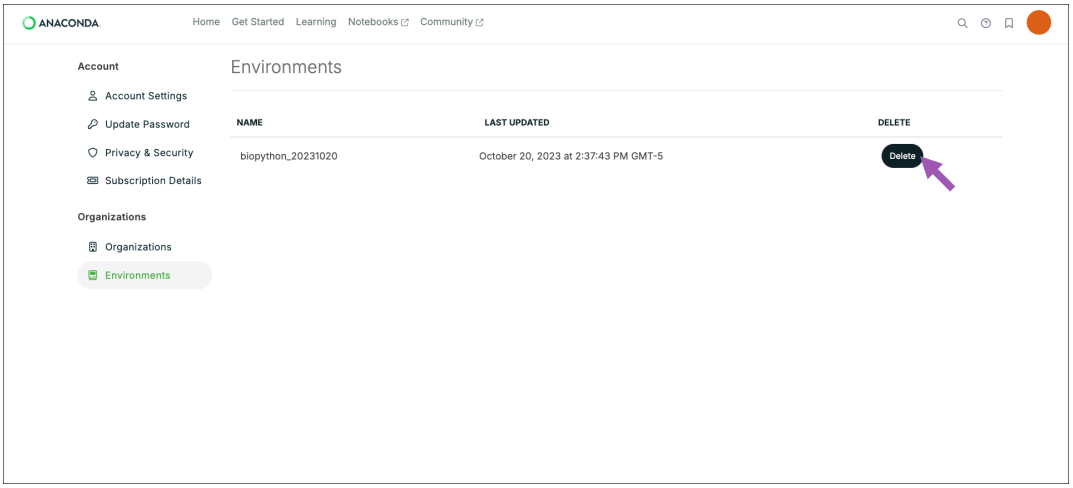
Note: Removing an environment in Navigator only removes your local copy. It will not remove or delete environments you have backed up to Anaconda Cloud.



Anaconda Cloud

1. In a browser, open Anaconda Cloud.
2. Sign in using your email address and password.
3. From your profile in the top-right corner, navigate to **Subscriptions**.
4. Select the **Environments** page.
5. Select **Delete** in the row associated with the environment you want to remove.

Note: Removing an environment in Anaconda Cloud only removes it from Anaconda Cloud. It does not affect any local copies.



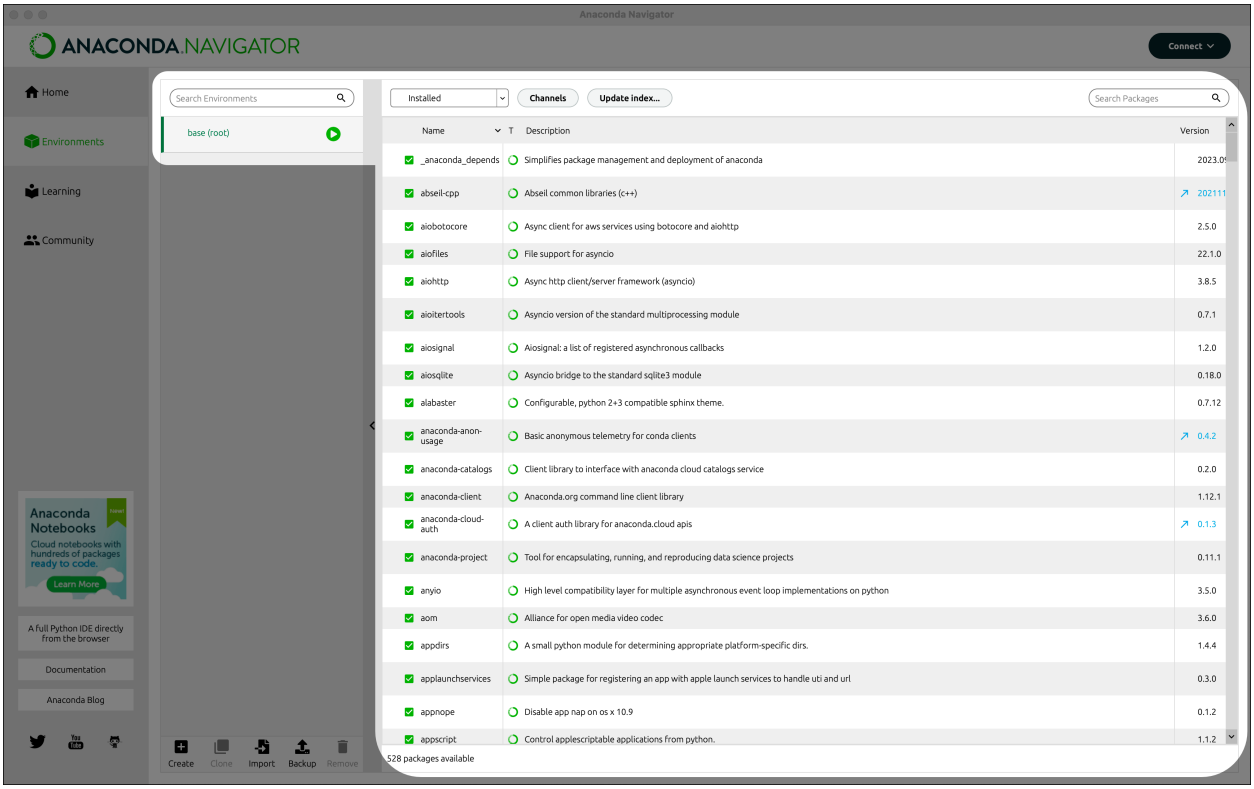
Advanced environment management

Navigator provides a convenient graphical interface for managing conda environments, channels, and packages. If you're comfortable working with Anaconda prompt (or terminal on Linux or macOS), you can access additional, advanced management features. To learn more, see Managing environments in the conda documentation.

Managing packages

On the **Environments** page, the packages table in the right column lists the packages included in the environment selected in the left column.

Note: Packages are managed separately for each environment. Changes you make to packages only apply to the active environment.



Tip: The **Update Index** button refreshes the packages table with all packages that are available in any of the enabled channels.

Filtering the packages table

By default, only installed packages are shown in the packages table. To filter the table to show different packages:

1. Click the dropdown beside **Channels**.
2. Select which types of packages to display.

Note: Selecting the *Updatable* filter option lists packages that are installed and have updates available.

Searching for packages

To search for a specific package, type all or part of the package's name into the **Search Packages** box.

The results of the search depend on:

- the channels added to Navigator,
- the selected package list filter option, and
- the environment selected, if searching for already-installed packages

If a package you are expecting doesn't appear in the search, make sure you have the correct filter option and environment selected. If the package is not available in the default channels, make sure the correct channels are added to your **Channels** list.

Installing a package

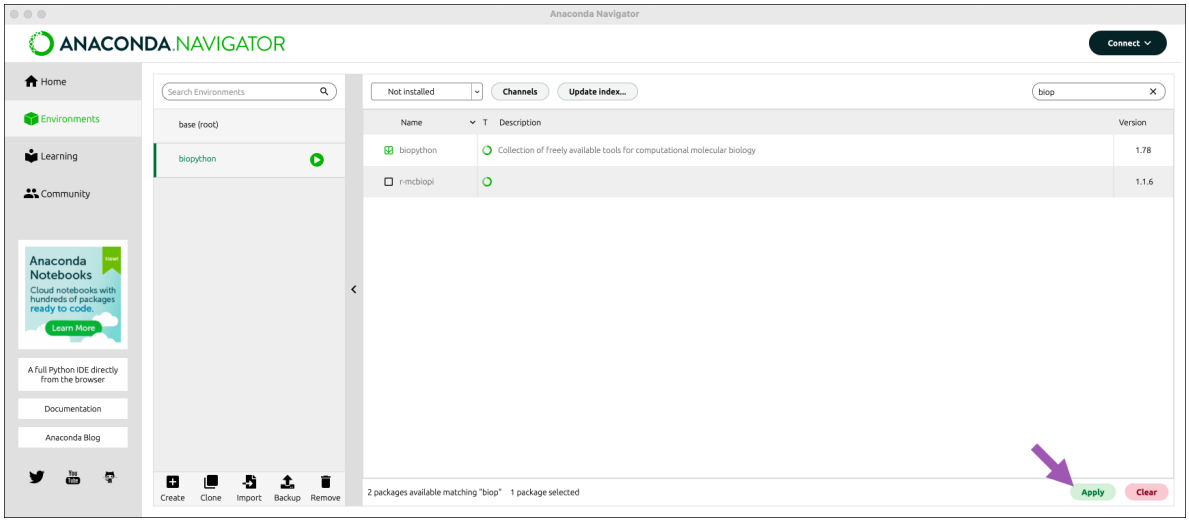
1. Select the environment where you want to install the package.

   Note: Anaconda does not recommend installing packages in your `base` environment.

2. Select the *Not Installed* filter option to list all packages that are available in the environment's channels, but not installed.

   Note: Only packages that are compatible with your current environment are listed.

3. Use the **Search Packages** box to narrow the package options, if necessary.
4. Select the package you want to install.
5. Click **Apply**.



6. Review the **Install Packages** information. This dialog lists the packages chosen for installation and all dependencies of those packages that also need to be installed.

   You can sort the list of packages to be installed by the following information:

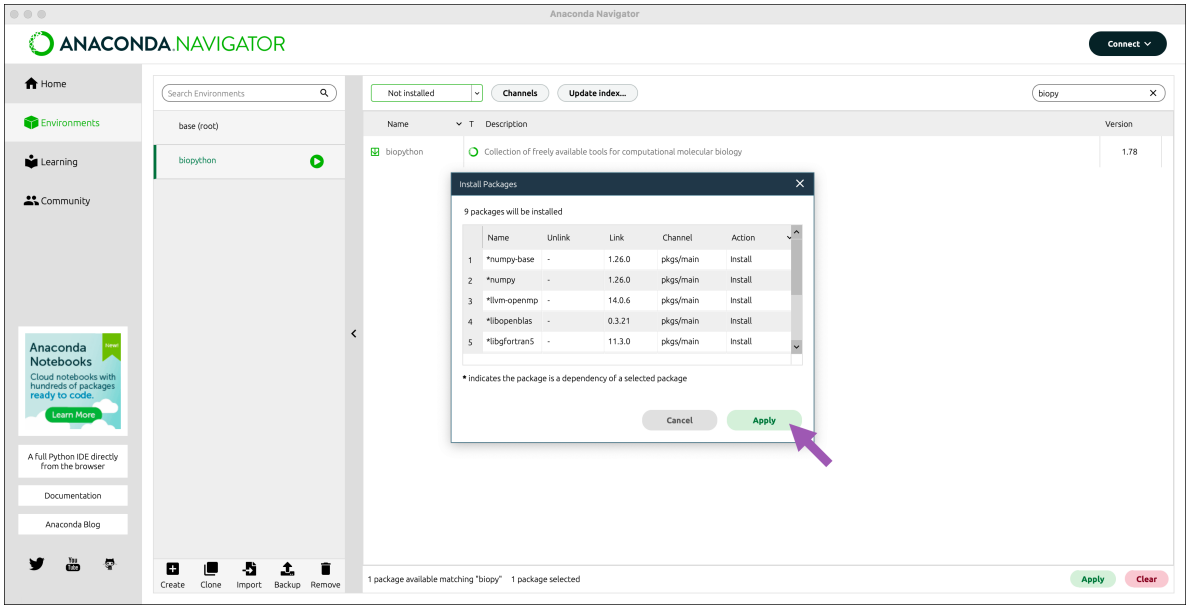
   Name
   : The name of the package.

   Unlink
   : The package version being uninstalled.

   Link
   : The package version being installed.

   Channel
   : The channel from which the package is being installed.

Action
The action being taken. In this case, “Install”.



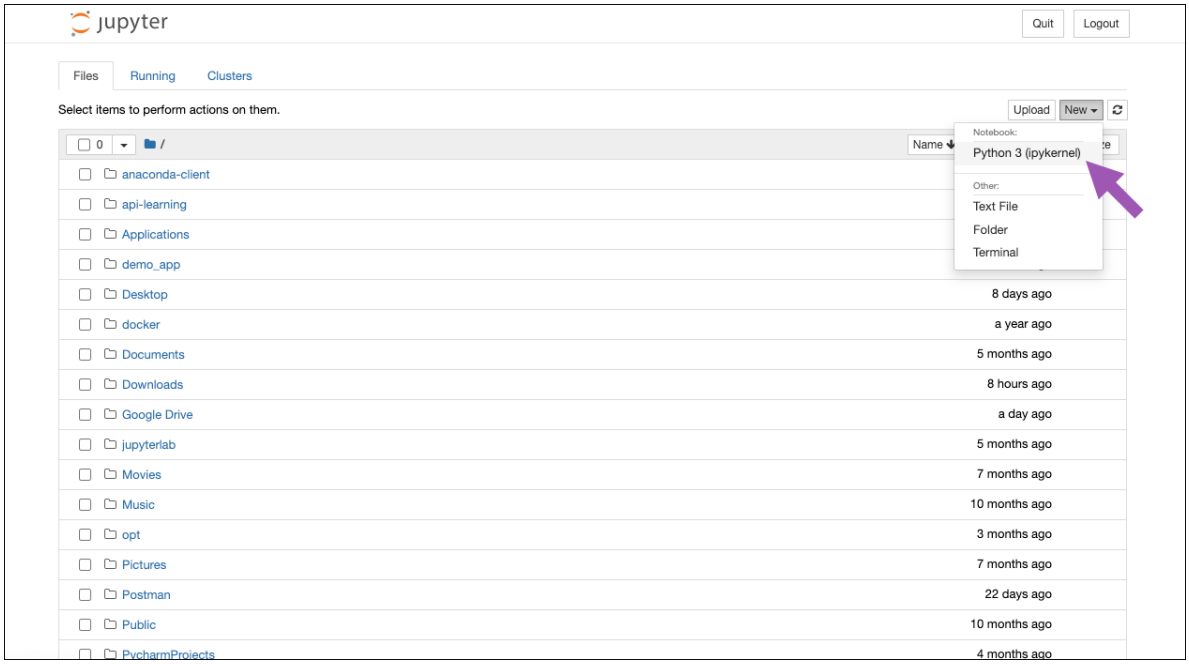
7. Click **Apply**.

Tip: If a new package doesn't appear in the packages table after you install it, select the **Home** page, then click **Refresh** to reload the packages table.

Confirming a package is installed correctly

Once a package is installed, it appears in the Installed package list for the given environment, but another way to confirm that a package is installed correctly is by opening a Jupyter Notebook in that environment, importing the package, and displaying its help text. These instructions assume you created an environment named `biopython` and installed the BioPython package into it.

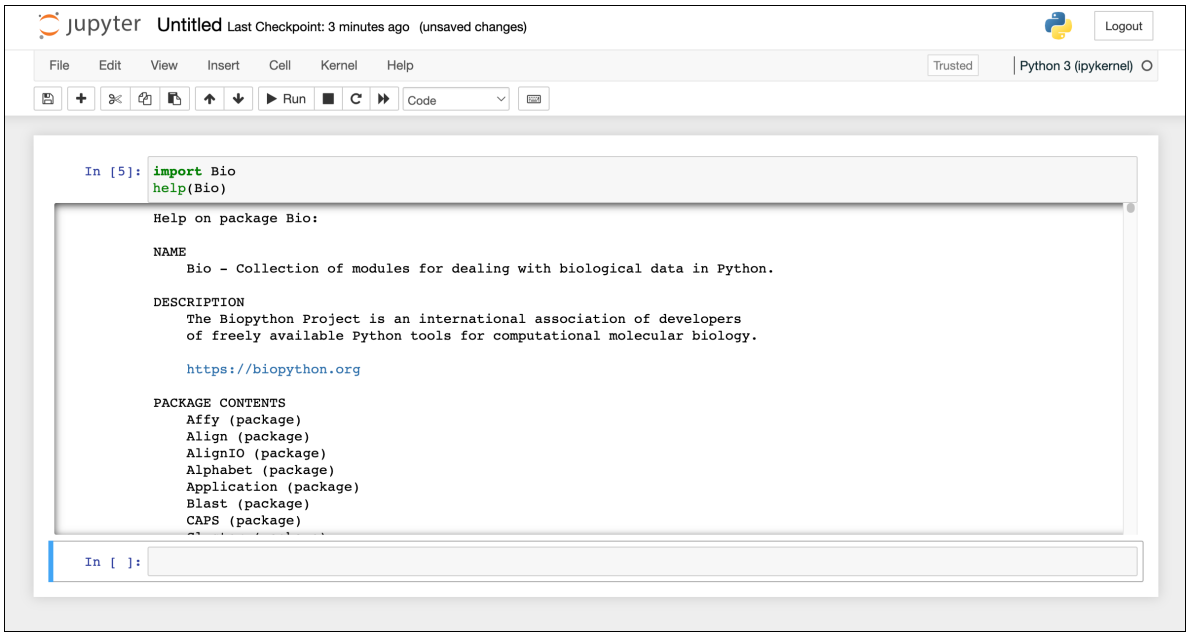
1. On the **Home** page, select the `biopython` environment from the environment dropdown.
2. Click **Install** on the Jupyter Notebook application tile to install it into the `biopython` environment.
3. Launch Jupyter Notebook from its application tile.
4. In the Jupyter Notebook, click **New** and select the Python 3 kernel.



5. Copy and paste the following code into the first cell:

```
import Bio
help(Bio)
```

6. To run the code, click **Run** or use the keyboard shortcut Ctrl+Enter (Windows)/Ctrl+Return (Mac).
7. The BioPython help text is displayed.



Note: To determine the import name of a package (such as `Bio` for BioPython), search the package's documentation.

Updating a package

To mark packages for updating:

1. Select the *Updatable* filter option to list all installed packages that have updates available.
2. Select the blue arrow on the line(s) of the package(s) you want to update.
3. Click **Apply**.

Installing a different package version

1. Select the checkbox beside the package whose version you want to change.
2. Select *Mark for specific version installation*. If other versions are available for this package, they are displayed in a list.
3. Select the package version you want to install.
4. Click **Apply**.

Removing a package

1. Select the checkbox beside the package you want to remove.
2. Select *Mark for removal*.
3. Click **Apply**.

Advanced package management

Navigator provides a convenient graphical interface for managing conda environments, channels, and packages. But if you're comfortable working with Anaconda Prompt (terminal on Linux or macOS), you can access additional, advanced management features. To learn more, see Managing packages in the conda documentation.

Managing channels

Channels are locations where `conda` looks for, downloads, and installs packages. Navigator is capable of connecting to a few important conda package hosting providers— Anaconda.org, Anaconda.cloud, and Anaconda's enterprise on-prem Package Security Manager—in order to access channels. Navigator can also connect to individual channels that are privately hosted or saved in your own computer files.

When managing channels in Navigator, you can refer to a channel either by its full URL or by its name. For example, let's say you want to look for packages on the "conda-forge" channel of Anaconda.org. Either of these channel variations will look for packages in the same place:

- By name - conda-forge
- By URL – https://conda.anaconda.org/conda-forge

Note: Referring to a channel by its name requires that the channel alias be set. By default, it is set to `https://conda.anaconda.org/`. For more information about channel aliases, see channel_alias: Set a channel alias in the conda documentation."

Caution: Most channels on Anaconda.org are completely free to use. However, Anaconda does provide mirrors of four channels that are subject to Anaconda's Terms of Service: main, r, msys2, and anaconda. For more information about Anaconda's TOS, see our TOS FAQ.

Adding a channel in Navigator

1. Click **Channels** to open the channels manager.
2. Click **Add**.
3. Enter the channel name or URL and press Enter (Windows)/Return (Mac).

   Note:

   - A channel URL can also contain an access token parameter and value, if necessary.
   - URLs must begin with `https://` when entering them into the channels manager.

4. Click **Update channels**.

Adding a channel in your .condarc file

Since Navigator is built on the conda package manager, you can also add channels to navigator using conda's configuration file: `.condarc`.

1. To open the `.condarc` file in Navigator, open Preferences and then click **Configure conda**.

   For more information on editing configuration files, see *Editing Navigator and conda configuration files*.

2. To add channels in the `.condarc` file, list them under the `channels:` setting, similar to the following example:

```
channels:
  - conda-forge
  - defaults
```

Note: Navigator searches the channels list in order, starting at the top.

For more information on editing your `.condarc` file, see Using the .condarc conda configuration file and Settings in the conda documentation.

Deleting a channel

1. Click **Channels** to open the channels manager.
2. Click **Delete** beside the channel name.
3. Click **Update channels**.

Hiding Navigator tiles

Anaconda Navigator contains some configuration options that allow you to customize the visibility of application tiles available on the Navigator **Home** tab.

Creating configuration files

To customize Navigator's tiles, create a configuration file (for example, `hide-tiles.yaml`) in the Navigator applications folder.

Note: Configuration files can be named whatever you want (within the character limits for files in your operating system), but must be in `.yaml` format.

The Navigator applications folder is inside the hidden `.anaconda` folder, which is created when Navigator is opened for the very first time.

Choose the tab that corresponds with your operating system for command line instructions on opening the Navigator applications folder and creating a `.yaml` file within it.

Windows CLI

1. Open an Anaconda Prompt window.
2. Navigate to the Navigator applications folder by running the following command:

```
cd %APPDATA%\.anaconda\navigator\applications\
```

3. Create a new blank configuration file by running the following command:

```
# Replace <FILE_NAME> with the desired name for your config file
# For example, nav-tile-config.yaml
type nul > <FILE_NAME>.yaml
```

4. Open the new file in your default text editor by running the following command:

```
<FILE_NAME>.yaml
```

macOS and Linux CLI

1. Open a Terminal window.
2. Navigate to the Navigator applications folder by running the following command:

```
cd ~/.anaconda/navigator/applications/
```

3. Create a new blank configuration file by running the following command:

```
# Replace <FILE_NAME> with the desired name for your config file
# For example, nav-tile-config.yaml
touch <FILE_NAME>.yaml
```

4. Open the new file in your default text editor by running the following command:

```
open <FILE_NAME>.yaml
```

Hiding existing tiles

The tiles that are visible on the Navigator **Home** page are controlled by the channels you have in your channels list. For example, the JupyterLab tile, along with the `jupyterlab` package, is available on the Home page when you have the `defaults` channel in your channels list, but becomes unavailable (and not visible) if `defaults` is removed from the channels list.

Furthermore, if you add `conda-forge`, `bioconda`, or other repository channels to your channels list, you will see additional application tiles on the Home page.

If you don't want some of these tiles to be visible, you can use the config `.yaml` file in your Navigator applications folder to set their availability to `false`.

There are some default applications that have hardcoded names within Navigator:

- Anaconda AI Navigator - `ai_navigator`
- Anaconda Cloud Notebooks - `anaconda_notebooks`
- Anaconda Toolbox - `anaconda-toolbox`
- EduBlocks - `edublocks`
- Glueviz - `glueviz`
- IBM watsonx - `ibm_watson`
- JupyterLab - `jupyterlab`
- Jupyter Notebook - `notebook`
- Oracle Cloud Infrastructure - `oracle_oci`
- Orange 3 - `orange3`
- PyCharm Community - `pycharm_ce`
- PyCharm Professional - `pycharm_pro`
- PythonAnywhere - `python_anywhere`
- PyScript - `pyscript`
- QT Console - `qtconsole`

- RStudio - `rstudio`
- Spyder - `spyder`
- VS Code - `vscode`

Any other package tiles are hidden by their tile name.

1. *Create a new config file* or edit an existing one.
2. Add text similar to the following, depending on the tile(s) you want to hide:

```
vscode:
    is_available: false
pycharm_ce:
    is_available: false
# For example, if you have conda-forge added as a channel
pyboat:
    is_available: false
gnuradio-core:
    is_available: false
```

In this example, the VS Code and PyCharm Community default application tiles and the `pyboat` and `gnuradio-core` tiles from `conda-forge` will be hidden from users in the Navigator **Home** tab.

Caution: If your tiles fail to hide, ensure that your yaml file does not contain any tab spacing. Use four spaces instead of a tab for any indents.

Note: Navigator currently does not support pattern matching or regex while hiding tile names.

Editing Navigator and conda configuration files

You can edit Navigator and conda configuration files through either the *Navigator Preferences dialog* or in your *preferred text editor*.

Caution: Be careful when changing values directly in the configuration files for Navigator or conda. Incorrect configuration can cause issues with these products.

Editing with the Navigator Preferences dialog

1. In Anaconda Navigator, open the Navigator Preferences dialog.

Windows/Linux

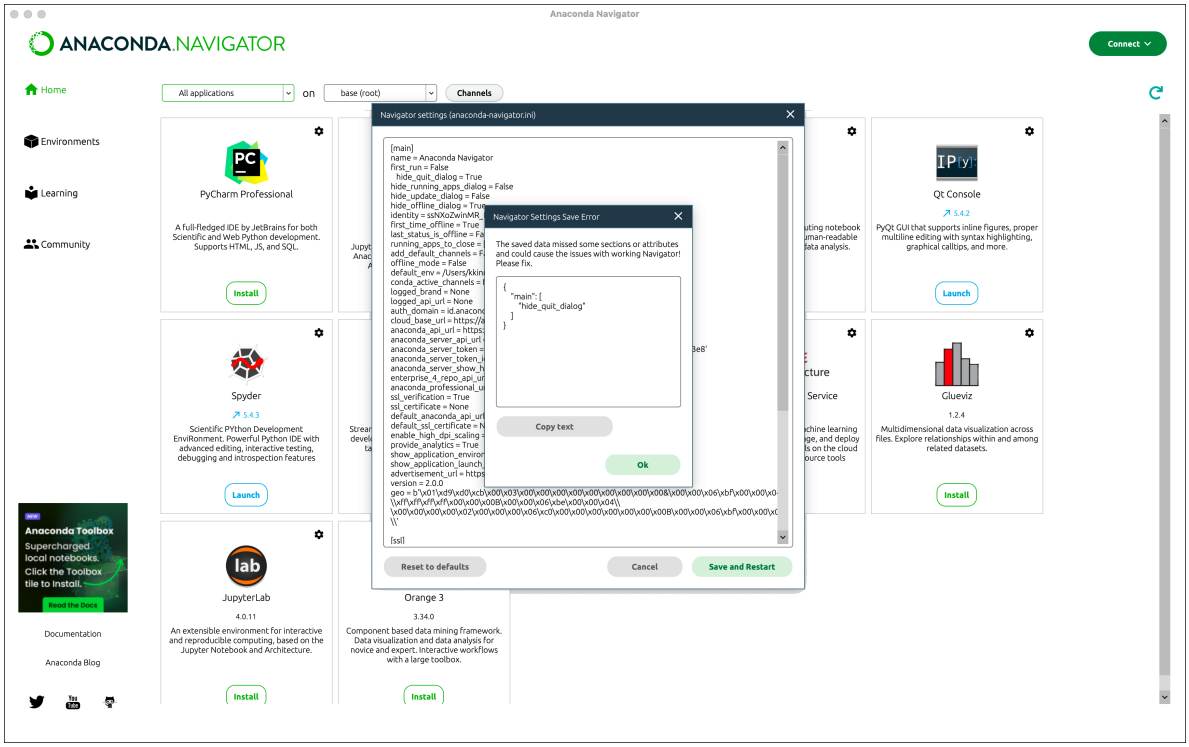
Open the **File** menu and click *Preferences*.

macOS

Open the **Anaconda Navigator** or **python** menu and click *Preferences*.

2. Click **Configure Navigator** to open the `anaconda-navigator.ini` file or click **Configure Conda** to open the `.condarc` file within Navigator.
3. Edit the file to change any configurations.

   When you edit the Navigator and conda configuration files in Navigator, a validation tool warns you about missed requirements or incorrect formatting. The `.condarc` file must be a valid `.yaml` format file.



4. Click **Save and Restart** to save any changes to the open configuration file and restart Navigator.

Editing with your preferred text editor

Follow these steps to locate, open, and edit the `.condarc` or `anaconda-navigator.ini` files in your preferred text editor:

Edit `.condarc`

1. Open your `.condarc` file in your text editor of choice.

Where is my `.condarc` file?

To locate your `.condarc` file, open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
conda config --show-sources
```

Example return:

```
==> /Users/<USERNAME>/.condarc <==
channels:
- defaults
```

While the `.condarc` is most likely in your Home directory, it is a hidden file, and is not visible in file browsers under normal circumstances. For help viewing hidden files on:

Windows

For more information on viewing hidden files and folders in Windows, see View hidden files and folders in Windows in Microsoft's documentation.

macOS

To view hidden files on macOS, use Shift+Cmd+. in your Finder.

Linux

To view hidden files on Linux, use Alt+. or Ctrl+H (depending on your file manager).

2. Make and save your changes.

   The `.condarc` file must be a valid `.yaml` format file.

3. Close and reopen Navigator or any Anaconda Prompt or command line windows.

Edit `anaconda-navigator.ini`

1. Open your `anaconda-navigator.ini` file in your text editor of choice.

Where is my `anaconda-navigator.ini` file?

The `anaconda-navigator.ini` file is created after you have opened Navigator for the first time. It is located in the `navigator` folder, which is inside a hidden `.anaconda` folder your Home directory.

Hidden files and folders are not visible in file browsers under normal circumstances. For help viewing hidden files on:

Windows

For more information on viewing hidden files and folders in Windows, see View hidden files and folders in Windows in Microsoft's documentation.

macOS

To view hidden files on macOS, use Shift+Cmd+. in your Finder.

Linux

To view hidden files on Linux, use Alt+. or Ctrl+H (depending on your file manager).

2. Make and save your changes.
3. Close and reopen Navigator or any Anaconda Prompt or command line windows.

Building Anaconda Navigator applications

In this tutorial, you will learn how to add a tile to Anaconda Navigator that launches your custom application.

Using the JupyterLab feedstock as a base, you'll make modifications to files in the build recipe to declare the package as an application for Navigator, then rebuild it and upload it to an Anaconda.org channel. We'll then add the channel in Navigator, causing the application to appear as a tile on the Home page.

Who is this for?

This tutorial is for users who want to generate an Anaconda Navigator app conda package from a given recipe. Prior knowledge of conda-build or conda recipes is recommended.

Prerequisites

Note: Any application you intend to launch from Anaconda Navigator should include a Graphical User Interface (GUI) component. Not all conda packages have graphical interfaces.

---

1. Install Miniconda or *Anaconda*.
2. If you installed Miniconda, you also need to install the `conda-build`, `anaconda-client`, and `anaconda-navigator` packages. Open an Anaconda Prompt (Terminal for macOS/Linux users) and run the following commands:

```
# Ensure conda is up to date
conda update --name base conda

# Install conda-build
conda install --name base conda-build anaconda-client anaconda-navigator
```

3. If necessary, *Create an account on Anaconda.org*.

Note: Your Anaconda.org username is the same as your Anaconda.org channel name.

Using a recipe

1. Make a new directory called myapp and then change to the new directory:

```
mkdir myapp
cd myapp
```

2. Create the recipe by opening a text file and naming it `meta.yaml`.
3. For this tutorial, we will use the jupyterlab recipe yaml from the jupyterlab feedstock as a base.

Note: Because JupyterLab is already an application in Navigator, you must change the `name:` parameter in the example jupyterlab `meta.yaml` to make sure that the app appears properly in Navigator.

```
package:
  name: my-test-app
```

App parameter in `meta.yaml`

The `app:` parameter in the `meta.yaml` file declares a conda package to be an app. The app parameter can contain four keys: `entry`, `summary`, `icon`, and `type`.

```
app:
  entry: jupyter lab
  icon: icon.png
  summary: JupyterLab {{ version }}
  type: desk
```

`entry:`
: The command required to run the package

`icon:`
: (Optional) The path to an image you want to appear on your app's tile in Navigator.

`summary:`
: A short description of the app.

`type:`
: The application type, such as `desk` for desktop application or `web` for a web application.

Build

Now that you have the `conda-build` recipe ready, you can use the `conda-build` tool to create the package.

Note: You must build and upload your app separately on Windows, macOS, and Linux machines in order for the package to be available on all platforms.

---

1. Navigate to your `myapp` directory by running the following command:

```
#Replace <PATH-TO-DIRECTORY> with the file path to your my app folder
cd <PATH-TO-DIRECTORY>/myapp
```

2. Build your application by running the following command:

```
conda build .
```

3. When conda-build is finished, it displays the exact path and filename of the conda package. See the Troubleshooting section if the conda-build command fails.

   Note: The path and filename will vary depending on your installation and operating system. For example:

   #### Windows

```
C:\Users\<USERNAME>\miniconda\conda-bld\win-64\my-test-app-1.2.4-py38_0.tar.
↪bz2
```

   #### macOS

```
/Users/<USERNAME>/anaconda3/conda-bld/osx-64/my-test-app-1.2.4-py38_0.tar.
↪bz2
```

   #### Linux

```
/home/username/miniconda/conda-bld/linux-64/my-test-app-1.2.4-py38_0.tar.bz2
```

   ---

4. Save the path and filename information for the upload step.

Upload to Anaconda.org

Now you can upload the new local packages to Anaconda.org.

1. First, log in to Anaconda.org from your terminal by running the following command:

```
anaconda login
```

2. Provide your Anaconda.org username and password. If the login is successful, you will see output similar to the following:

```
Using Anaconda.org api site https://api.anaconda.org

Username: jsmith
jsmith's Password:
login successful
```

> **Caution:** The following step must be done in the `base` conda environment. To return to your base environment, run the following command:
>
> ```
> conda activate base
> ```

3. Now that you are logged into your channel, you can upload the JupyterLab package. Choose a command that works for your operating system:

> **Caution:** Change your username, path, and filename to the exact username, path, and filename you saved when you built the application. These will vary depending on your installation and operating system.

Windows

```
anaconda upload C:\Users\<USERNAME>\miniconda\conda-bld\win-64\my-test-app-
↪1.2.4-py38_0.tar.bz2
```

macOS/Linux

```
anaconda upload /Users/<USERNAME>/miniconda/conda-bld/osx-64/my-test-app-1.
↪2.4-py38_0.tar.bz2
```

For more information about Anaconda.org, see the Anaconda.org documentation.

Configure Anaconda Navigator

Now that the JupyterLab package has been uploaded to your Anaconda.org channel, you can add the channel to Anaconda Navigator.

1. Open Anaconda Navigator.

Windows

From the Start menu, search for "Anaconda Navigator" and click to open.

macOS

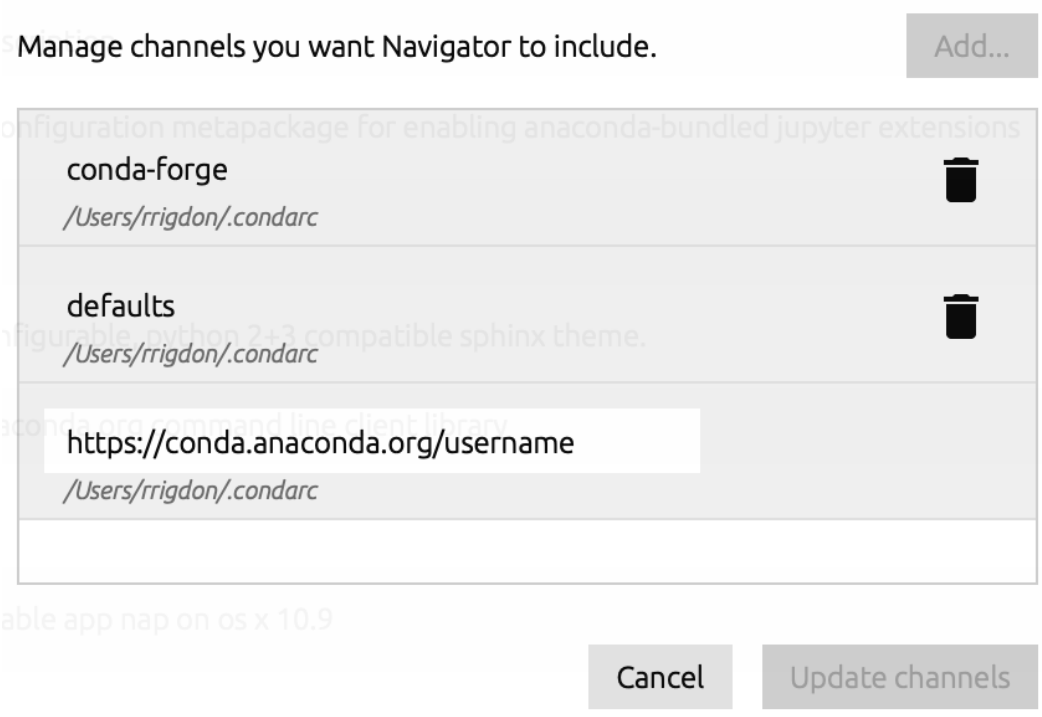
Open Launchpad, then click the Anaconda-Navigator icon.

Linux

1. Open a terminal window.
2. Open Navigator by using the following command:

```
anaconda-navigator
```

2. To add your channel, click **Channels**, then **Add**. Enter the URL to your Anaconda.org channel: https://conda.anaconda.org/<CHANNEL>, replacing <CHANNEL> with your Anaconda.org username.
3. Press Enter (Windows)/Return (Mac) and click **Update Channels**.



4. Close and restart Anaconda Navigator. Your app will be displayed on the Home page.

Troubleshooting

My app isn't appearing on the Home page

- Check that the conda package has been uploaded to your Anaconda.org channel.
- Check that your channel has been added to the Channels list.
- Remove the `.anaconda/navigator` folder from your home directory to reset Navigator's configuration information, then restart Navigator.

My app isn't launching

1. If the application does not launch after installation, confirm that it works via the command line by running the following command:

```
conda run jupyter lab
```

> **Note:** If you are not using the example feedstock, the command after `run` will be the `entry:` command you have designated.

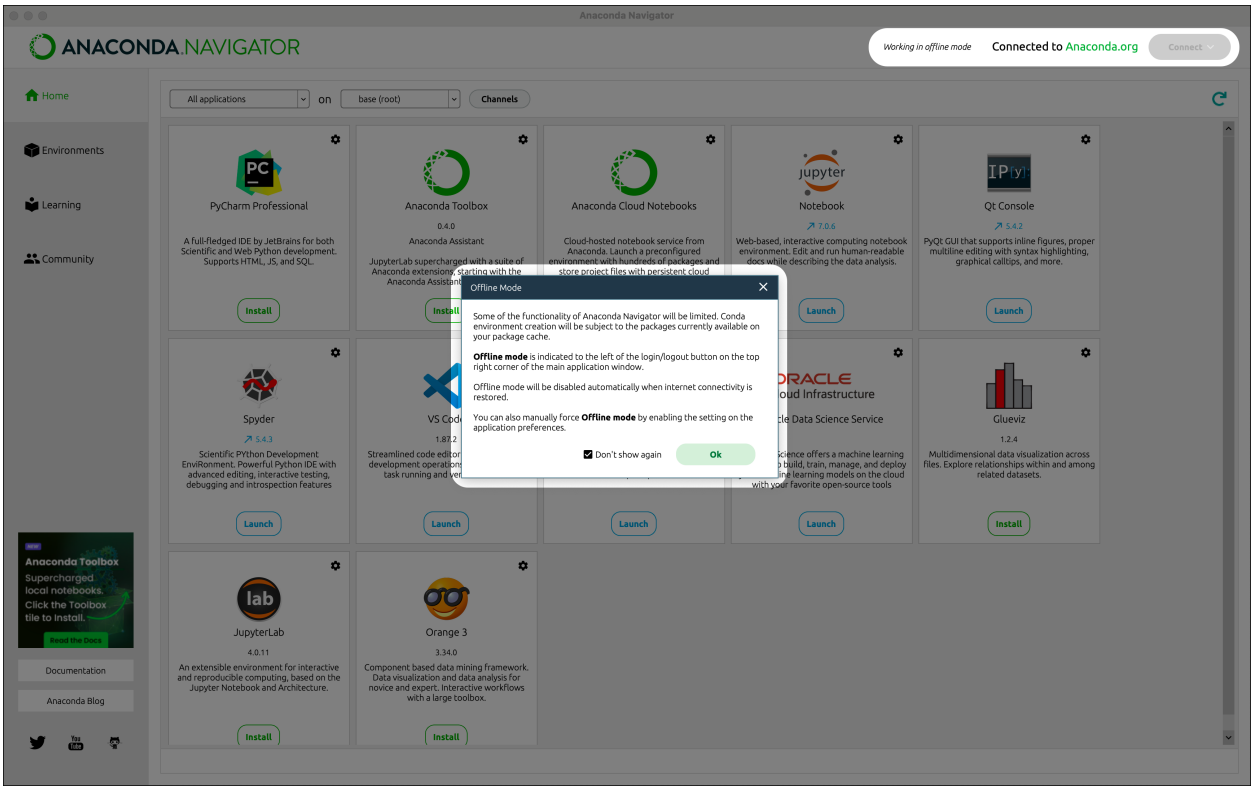
2. If JupyterLab starts correctly with conda, remove the `.anaconda/navigator` folder from your home directory to reset the Navigator configuration information and enable the app to launch correctly from the Navigator application. Then, restart Navigator.

Additional Information

For more information about adding Start Menu entries in Windows, see the menuinst documentation.

Enabling offline mode

Navigator is typically used online so that it can download and install packages. If Navigator detects that internet access is not available, it automatically enables offline mode and displays this message:

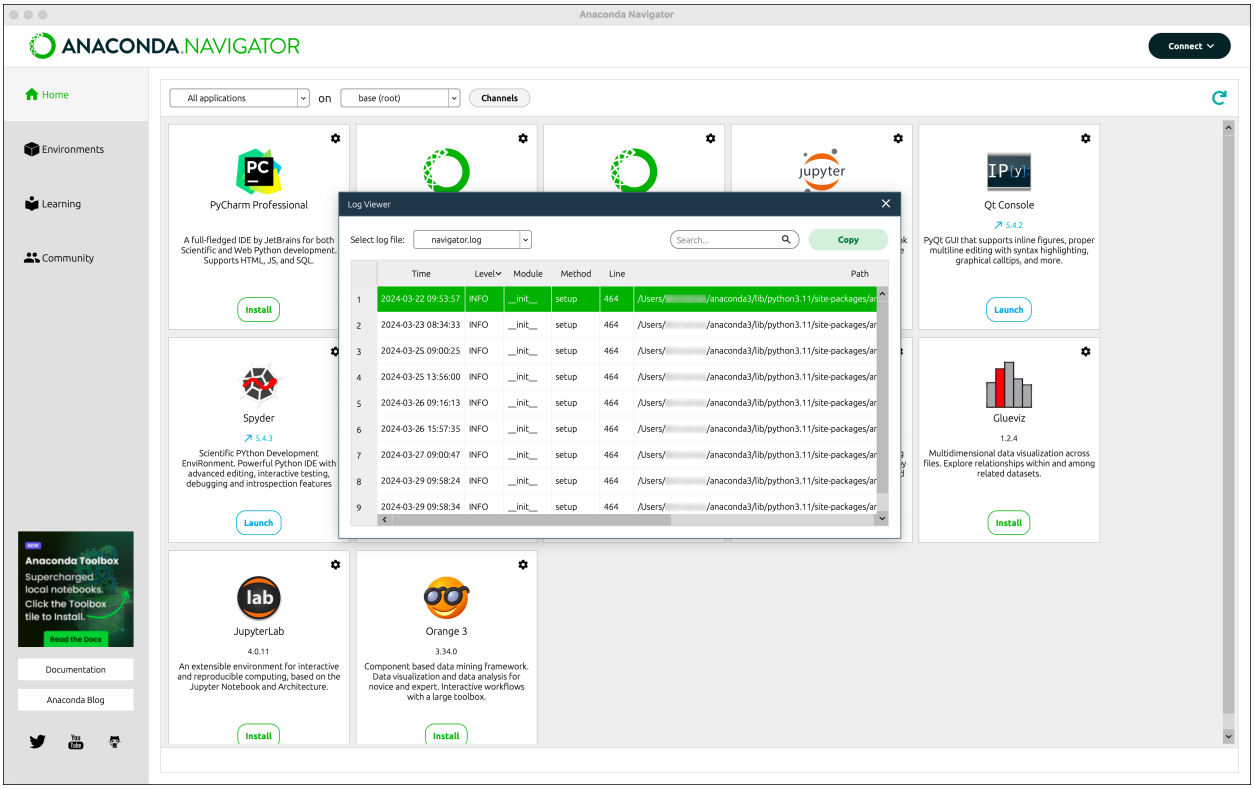


In the Preferences dialog, select **Enable offline mode** to enter offline mode even if internet access is available.

Using Navigator in offline mode is equivalent to using the command line conda commands `create`, `install`, `remove`, and `update` with the flag `--offline` so that conda does not connect to the internet.

Reviewing Navigator's logs

Select **Help > Logs viewer** to open Navigator's Log Viewer, which contains Navigator's application logs, sorted by date and timestamp.



These logs can also be found in the `navigator.log` file, available in the following paths, depending on your operating system:

Windows

```
# Replace <USERNAME> with the username of the account where Navigator is installed
C:\Users\<USERNAME>\AppData\Roaming\.anaconda\navigator\logs
```

If using the File Explorer, check the **Hidden items** box in the **View** tab to make the AppData folder visible.

macOS/Linux

```
~/.anaconda/navigator/logs
```

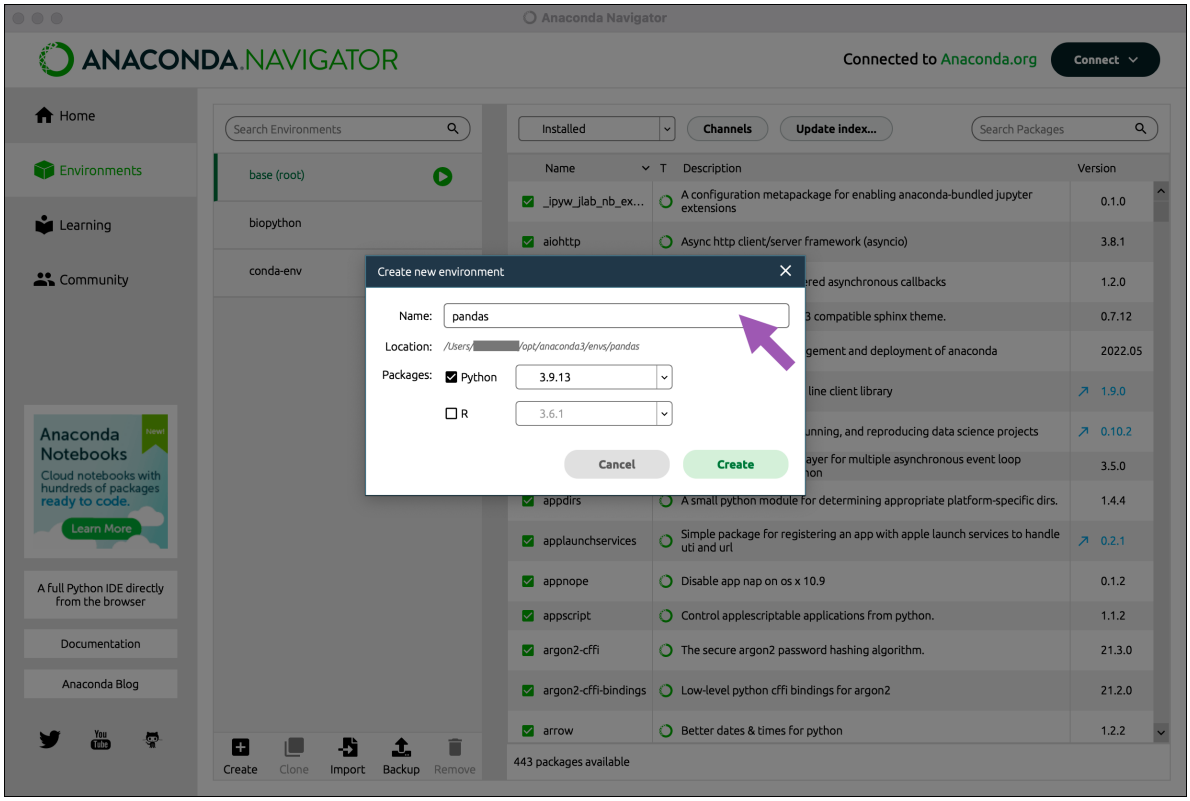
Tutorial:

How to install and run Pandas from Anaconda Navigator

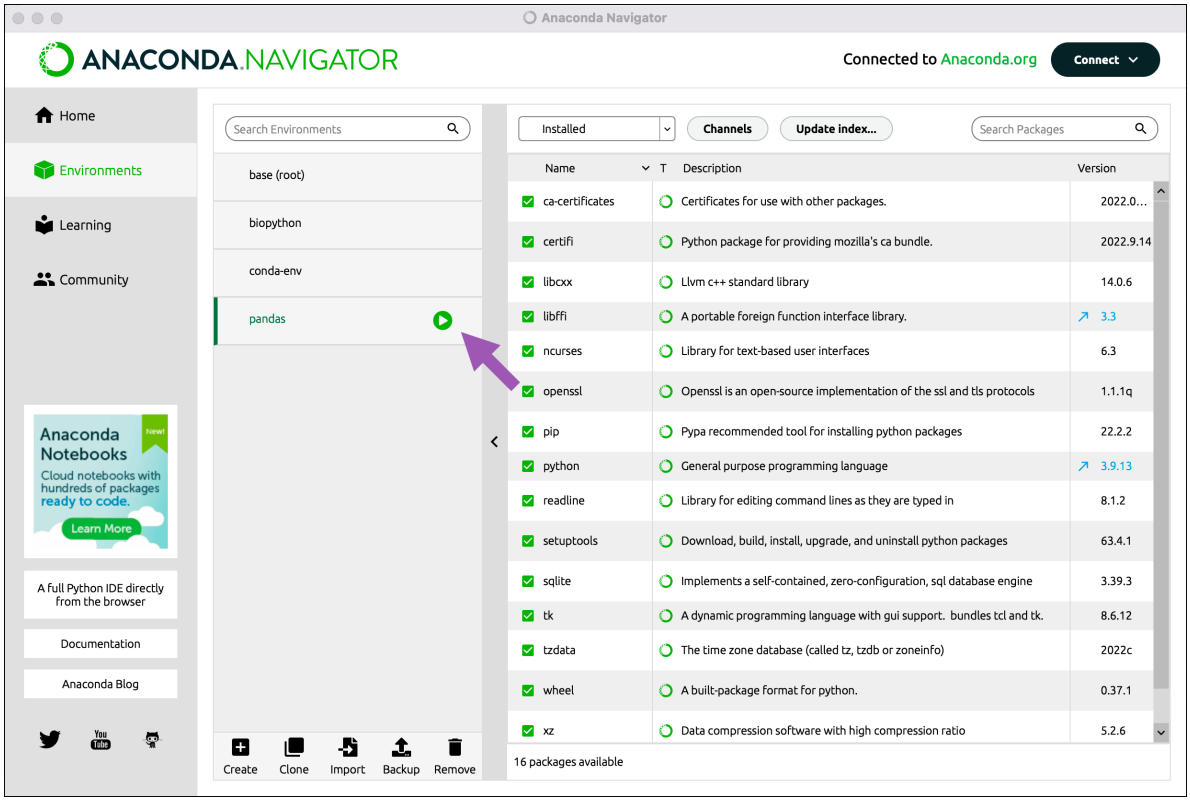
Pandas is a common Python tool for data manipulation and analysis. This topic explains how to use Navigator to set up and begin working with Pandas via your choice of tool: terminal, Python, IPython, or Jupyter Notebook. The steps are similar for *installing and opening* nearly any package.

1. *Start Navigator*.
2. Open the **Environments** page.

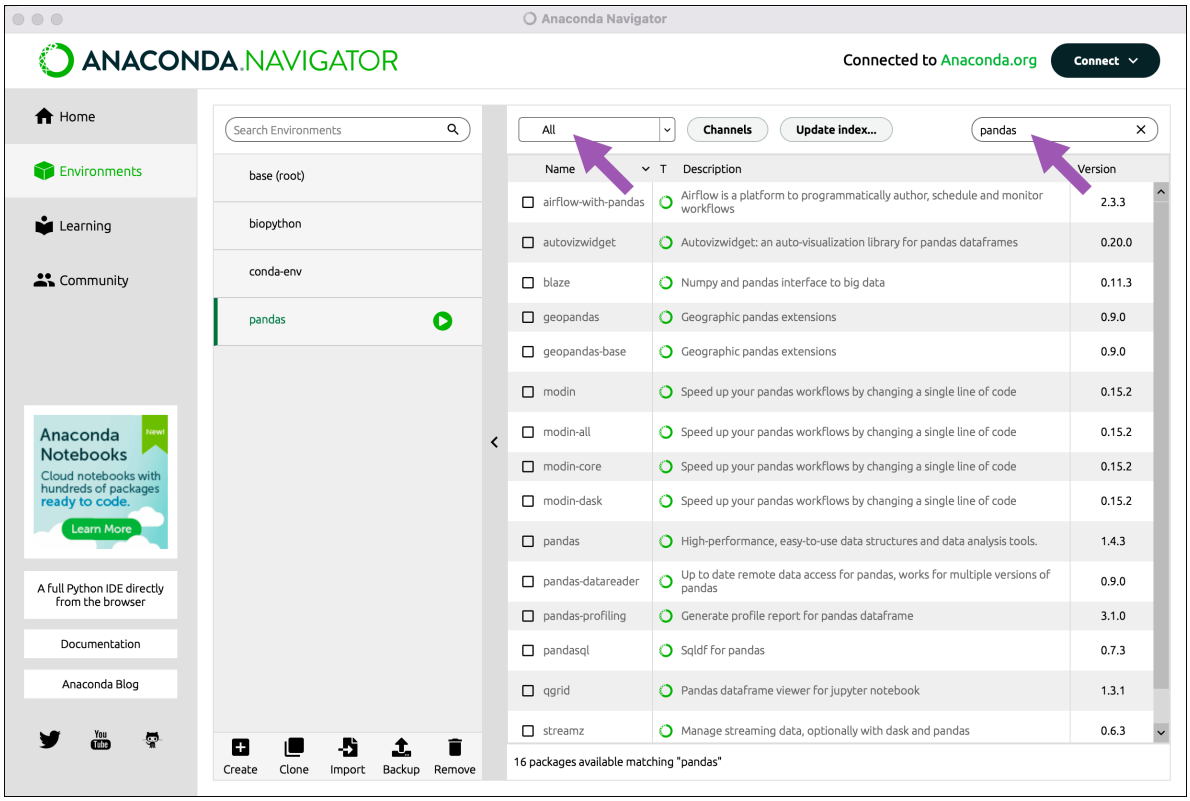
3. Click **Create**. When prompted, enter a descriptive name for the environment, such as “Pandas”.



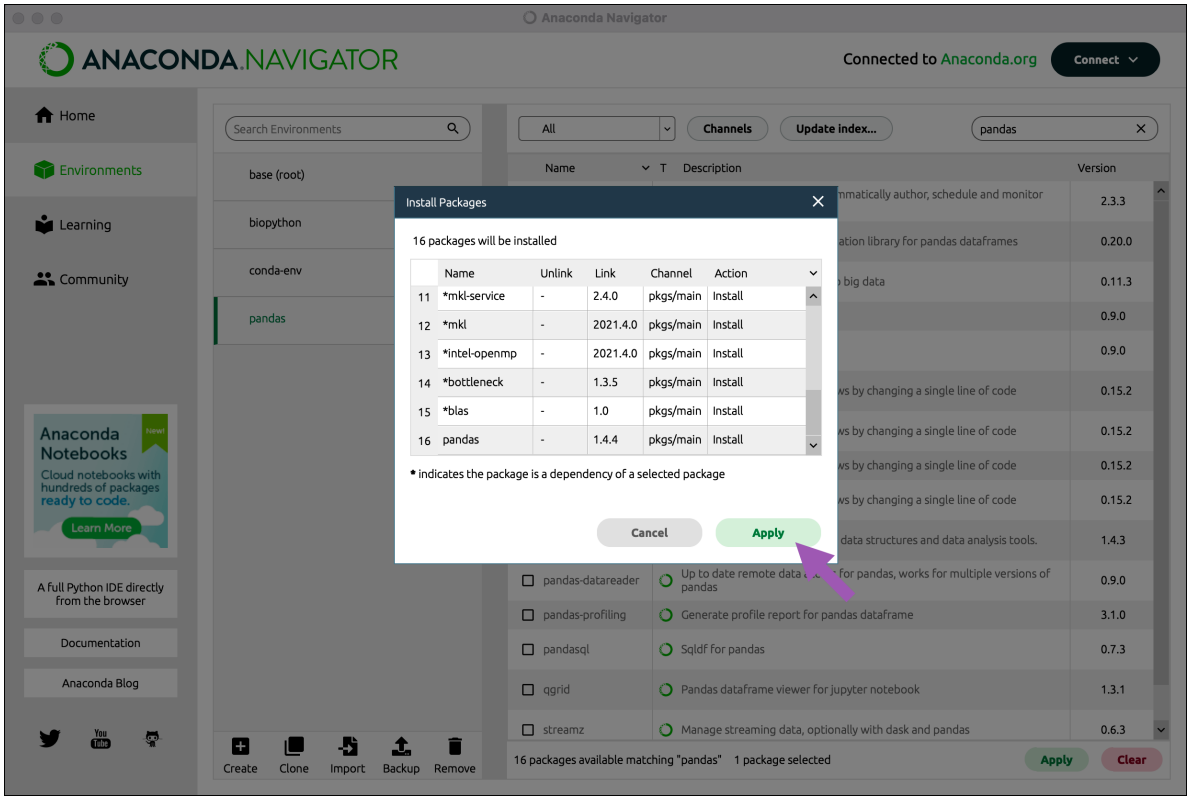
4. Select a Python version to run in the environment.
5. Click **Create**.
6. The new, active environment appears in the environments list. An active environment is highlighted with a green play icon.



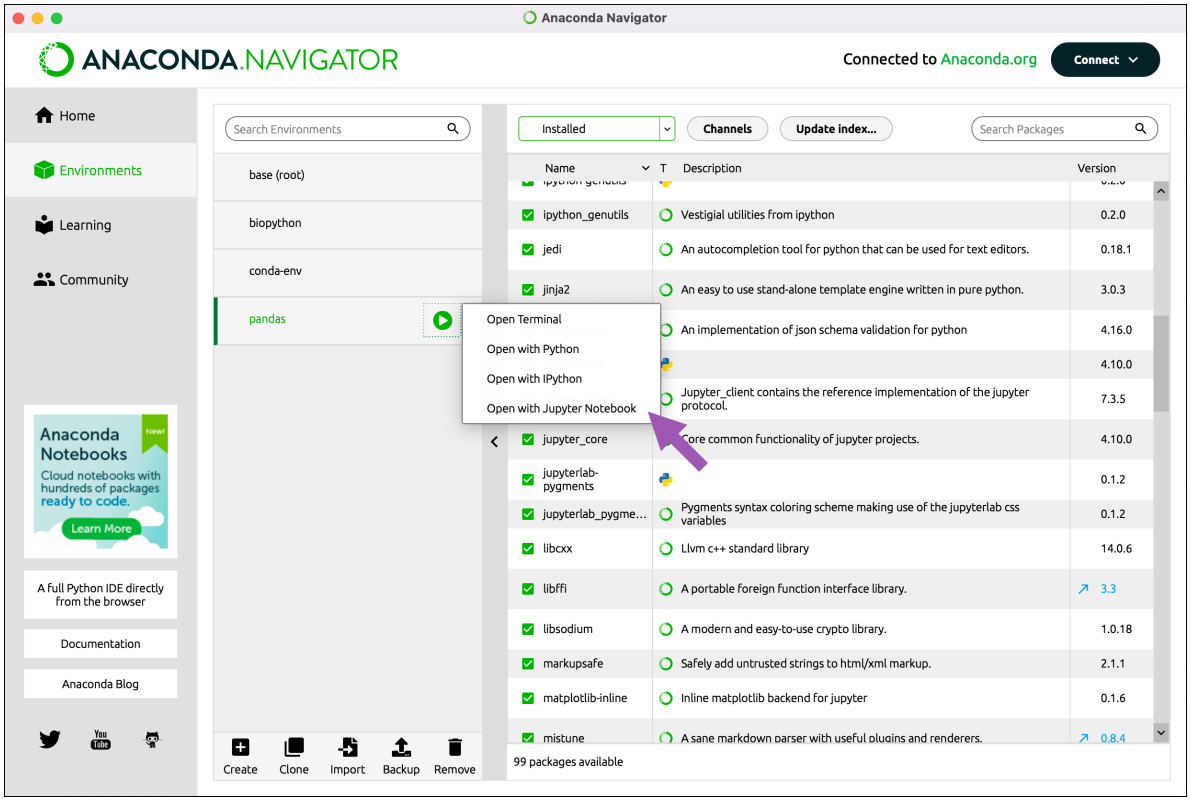
7. In the list above the packages table, select *All* to filter the table to show all packages in all channels.
8. In the **Search Packages** field, search for “pandas”. Pandas appears as a package available for installation.



9. Select the checkbox in front of the Pandas package name.
10. Click **Apply**.
11. Review the dialog that displays pandas and all of its dependencies.
12. Click **Apply**.



13. A progress bar appears below the packages pane while Pandas and its dependencies are installed.
14. To begin using your new environment, on the **Environments** page, click the play button beside your active Pandas environment name.
15. In the list that appears, select the tool to use to open Pandas. To access the iPython or Jupyter Notebook tool options, install JupyterLab or Jupyter Notebooks from the **Home** page.



Note: In macOS, you will need to give Anaconda Navigator permission to open the tool you choose, if it is your first time using Navigator to open it.

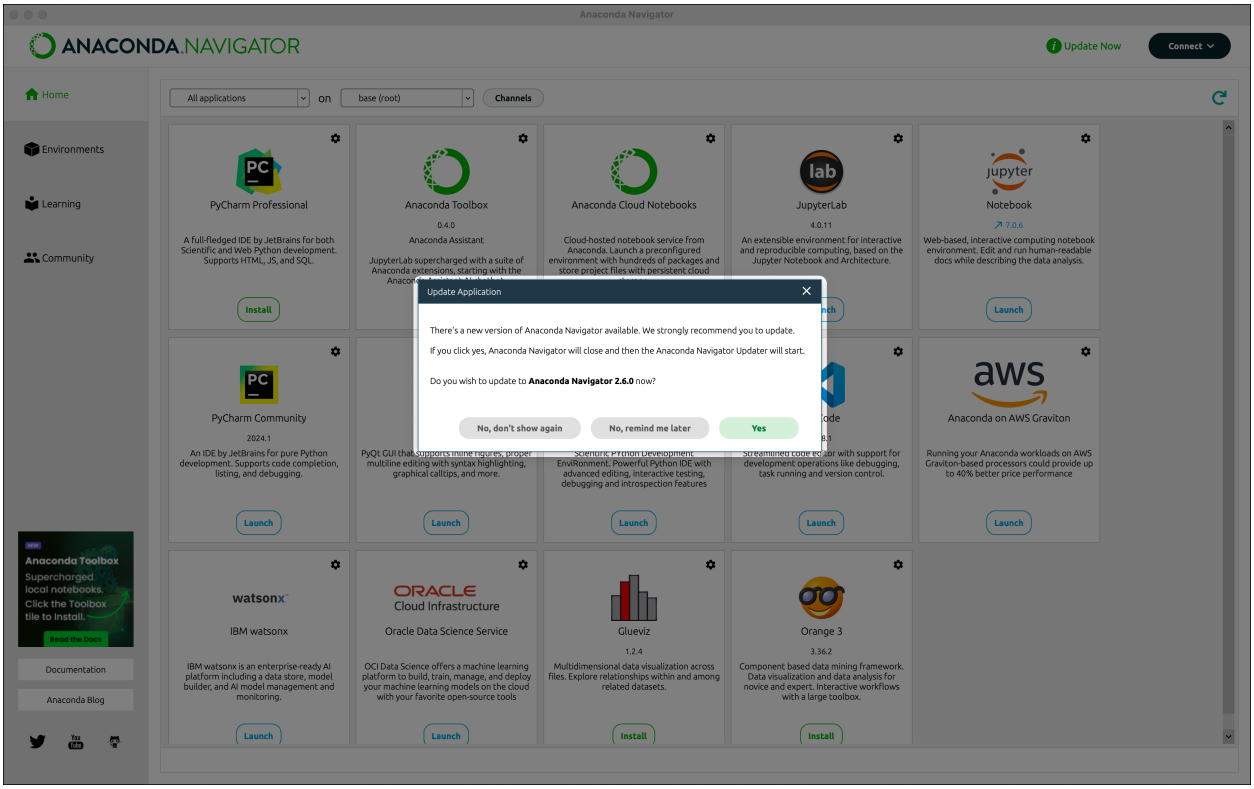
Learn more about Pandas

- 10 Minutes to Pandas
- Pandas Cookbook
- Panda's Diet

Updating Navigator

Navigator automatically checks for version updates when launched. If one is available, a popup displays that allows you to update to the newest version or keep your current version.

Note: Anaconda recommends keeping Navigator updated to the latest version.



Manual update

You can also update Navigator manually through a command line interface (CLI). This can either be done with the `update` or `install` commands:

Update command

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. If necessary, update the conda package manager in your base environment by running the following command:

```
conda update --name base conda
```

3. Update the `anaconda-navigator` package in your base environment by running the following command:

```
conda update --name base anaconda-navigator
```

If Navigator is already up to date, your command line will display:

```
# All requested packages already installed.
```

Caution: If you see the above message, but believe Navigator should have updated, specify the exact version using the instructions in the Install command tab.

Install command

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Search for the available versions of `anaconda-navigator` by running the following command:

```
conda search anaconda-navigator
```

> **Tip:** You can also reference the Navigator *release notes* for the latest version number.

3. Install the version of `anaconda-navigator` you want by running the following command:

```
#Replace <VERSION> with the version of Navigator you want to use
conda install --name base anaconda-navigator=<VERSION>
```

Troubleshooting

For troubleshooting tips, see the *Navigator section of the Troubleshooting page*.

Downgrading Navigator

If you need to downgrade Navigator to a previously released version, you can use the `conda install` command in Anaconda Prompt (Terminal on macOS/Linux) and specify the version of Navigator you want to install. Along with this command, you may also need to specify a version of conda to avoid errors or conflicts.

Downgrading to Navigator v2.4.0

To downgrade Navigator to version 2.4.0, run the following command:

```
# No version of conda greater than 23.3.1 should be specified
conda install anaconda-navigator=2.4.0 conda=23.3.1
```

Downgrading to Navigator v2.3.0

To downgrade Navigator to any version earlier than 2.4.0, run the following command:

```
# No version of conda greater than 22.9.0 should be specified
conda install anaconda-navigator=2.3.0 conda=22.9.0
```

> **Caution:** Anaconda Navigator 2.4.0 and earlier versions are not compatible with Python 3.11. If you have Python 3.11 or later installed in your base environment (or the environment where you're installing *anaconda-navigator*) and the solver returns an "UnsatisfiableError" response about your Python installation, try the command again with a Python version lower than 3.11 specified. For example, *conda install anaconda-navigator=2.4.0 conda=23.3.1 python=3.10*

Uninstalling Navigator

Need to uninstall Anaconda Distribution?

See *Uninstalling Anaconda Distribution*.

To uninstall Anaconda Navigator, open the Anaconda Prompt (Terminal on macOS or Linux), and enter the following command:

```
conda remove anaconda-navigator
```

Release notes

2.6.4 – December 2, 2024

- Added **Do not show again** option to the login dialog.
- Users can now choose a specific file location for environments imported from Anaconda Cloud via the Import Environment dialog.

2.6.3 – September 30, 2024

- Navigator now supports SSO logins for Package Security Manager (On-prem) through Navigator's Anaconda Server repository connection.
- Improved channel link validation process to more accurately recognize valid links and minimize false invalid reports.
- Updated social media icons and links.
- Fixed a bug where Navigator would fail if its log files were corrupted.
- Fixed a bug where Navigator would fail if the `default_channels` section in the `.condarc` file was malformed.

2.6.2 – July 23, 2024

- The new *Anaconda AI Navigator* tile on the Home page now installs Anaconda AI Navigator automatically on Windows and macOS.
- **Login dialog improvements:**
  - The dialog reminder now appears every 24 hours instead of every hour.
  - The dialog no longer appears for users without access to anaconda.cloud.
  - The dialog no longer pops on top of other windows if Navigator is inactive.
- Navigator no longer fails on Windows machines with BitLocker enabled.
- Navigator no longer resizes itself when its window is activated on macOS.

2.6.1 – June 10, 2024

- Refreshed the sign in dialog. Users can now connect to a repository directly from the sign in dialog.
- Fixes for Dark Mode coloring.
- Fixed a bug that caused the update reminder to repeatedly appear if the user did not update.

2.6.0 – April 18, 2024

- Dark Mode can now be enabled from Preferences.
- Anaconda Toolbox is now installed by default in the base environment in Navigator.
- Added Python 3.12 support.

2.5.4 – March 27, 2024

- Removed DataSpell and Datalore app tiles.
- Updated Home page app tile positioning.

2.5.3 – March 4, 2024

- Users can now hide tiles on the Navigator Home page when the applications have dots (.) in their names.
- Fixed issue where system-level dark modes were causing some dialogs in Navigator to have erroneous black backgrounds with black text.
- Fixed issue where Navigator failed unexpectedly while logging an error.
- The "Upgrade now" notice on the top menu now reads "Update now".

2.5.2 – January 9, 2024

- When connecting to Anaconda Cloud, Navigator now skips the sign in pop-up and directly opens the Anaconda Cloud login page in your browser.

2.5.1 – November 14, 2023

- The **Update Index** action now checks for updates to installed applications every seven days.
- Navigator no longer freezes when the **Save and Restart** option is selected.
- Navigator no longer fails to start if the user's `.condarc` file is empty.

2.5.0 – September 20, 2023

- Added new Anaconda Cloud log in dialog
- Added new Anaconda on AWS Graviton application tile
- Replaced IBM Watson Studio Cloud application tile with IBM watsonx application tile
- Fixed issue where Navigator failed if launched while logged into Anaconda.org account with a validated email address
- VSCode now launches with the selected conda environment

2.4.2 – June 16, 2023

- Updated the design of the Anaconda Cloud (formerly known as Nucleus) sign-in dialog
- Added occasional prompts to sign in to Cloud account

2.4.1 – June 1, 2023

- Added support for Python 3.11
- Added support for conda 23.5.0
- Added Anaconda Notebooks application tile
- Renamed Anaconda Nucleus to Anaconda Cloud
- Deprecated support for Python 3.7
- Added better error messaging for issues detecting conda configuration file (.condarc)

2.4.0 – February 27, 2023

- Added support for conda 23.1.0
- Added option to hide/show hidden channels in Anaconda Server channels configuration dialog
- Renamed Team Edition to Anaconda Server and Commercial Edition to Anaconda Professional
- Removed Deepnote application tile
- Fixed link error in Oracle OCI application tile

2.3.2 – October 7, 2022

- Updated description of Deepnote application tile

2.3.1 – September 30, 2022

- Added new ad rendering service

2.3.0 – September 8, 2022

- Anaconda Partner Package Tiles have enhanced functionality
- Updated Community Tab Links
- Users can now filter applications on the Home page
- Added Oracle OCI Data Science to the Home page

2.2.0 – May 19, 2022

- Improved handling of missing or corrupt `anaconda-client` configuration files.
- Added conda commands, http requests, and more Navigator actions to debug logs.
- Application icons are now shown for custom application packages when cached.
- Added the DataSpell application to the **Home** page.
- Further improvements to the detection of installed applications.

2.1.4 – April 5, 2022

- Updated product and repository naming to match new branding. See the Anaconda Blog for more information.

2.1.2 – February 24, 2022

- VSCode launched from the Navigator will use the selected conda environment.
- Improved enumeration of packages from repositories that use the `.conda` format.
- Dependency minimum versions updated to address bugs in dependent packages.
- Overwriting an existing environment no longer creates an additional environment.
- Improved detection of pre-2019.1 PyCharm installations.
- Addressed issue where Navigator would not close after being open for several hours.
- Logging out from Team Edition while being offline no longer triggers a connection notification.
- Detected paths to third-party applications are now stored in preferences.
- Mitigated “check_hostname requires server_hostname” application launch errors.

2.1.1 – November 15, 2021

- Navigator startup speed has been improved.
- Numerous enhancements and bug fixes for Anaconda Team Edition users:
  1. Improved stability and status updates when Team Edition server cannot be reached.
  2. Added more visible option to bypass certificate validation if SSL certificate can not be validated.
  3. **Channels** button now always opens Team Edition channels wizard if user is logged in, not just during setup.
  4. Multiple channels wizard usability improvements.
  5. Navigator now supports email addresses as Team Edition logins.
  6. Logging out from CLI now causes Navigator to also be logged out.
- Resolved issue where conda configuration is lost when logging out, then back in.
- Third-party application (VS Code, PyCharm, etc.) detection and launch improvements:
  1. Application detection is reworked and now should detect latest app version if installed in default locations.
  2. If application fails to start (crashes in less than 10 seconds), error details are now displayed.
  3. Improved detection for closed applications when closing Navigator.
  4. Fewer application launch calls echoed to console when starting applications on Windows.
  5. Many smaller improvements with third-party application support.
- High DPI scaling is now disabled by default on Linux.
- Importing an incorrectly-configured environment no longer results in the existing environment getting deleted.
- SSL validation preferences now apply to server URLs being added through login wizards.
- Fixed multiple startup issues in some Windows environments.
- Due to how some OSes handle spaces in path names, new environment names can no longer contain a space character.

2.1.0 – September 24, 2021

- Added ability to back up environments to local file or Anaconda Nucleus (https://anaconda.cloud/).
- Environment Import dialog adds the ability to import an environment from Anaconda Nucleus.
- Added ability to log in to an Anaconda Nucleus account.
- Added new **Connect** dropdown menu with options to log in to a repository and an Anaconda Nucleus account (replaces **Sign In** button).
- Added automatic refresh of package index with a fresh installation.
- Added support of separate `.condarc` copy for AE4 Repository.
- Create Environment dialog now shows all Python/R versions available in configured repository channels.
- Some UI styling elements have changed.
- Fixed ability to detect a user that is logged in from CLI for all repos.
- Fixed display of previously-cached metadata in packages table.

2.0.4 – July 13, 2021

- Fixed launching of applications from Navigator.
- Fixed validation of Enterprise Edition and Team Edition channels.
- Fixed the fetching of available Team Edition channels during signin.
- Fixed adding Team Edition channels after signin.
- Fixed adding private Team Editon channels.
- Anaconda Enterprise Repository 4 login process no longer requires restart.
- Added message after Anaconda Enterprise login to remind users to configure their channels if they have not already done so.
- Navigator now detects AE4 properly and correctly verifies channels from AE4 after CLI signin.

2.0.3 – May 5, 2021

- Reworked login system:
  1. Added a main login pop-up to select a repository to connect.
  2. Added support of login to Commercial Edition.
  3. Added pop-ups to set domain on login for Team Edition and Enterprise Edition.
  4. Reworked login pop-ups for anaconda.org, Team Edition, Enterprise Edition.
  5. Added pop-up to set up default_channels for Team Edition.
  6. Added scroll bar for better user experience and other improvements.
  7. Added detection of Commercial Edition user already logged in via CLI.
  8. Added detection of Team Edition user already logged in via CLI.
- Added proper checks for SSL errors and unexpected errors.
- Fixed how environment names that begin with underscores are displayed.
- Fixed missing packages while doing setup for ATE/CE channels in default_channels.
- Fixed issue with redirecting users logged in via TE or AE4 to anaconda.org client page.
- Fixed clobbering `.condarc` settings.
- Fixed application install via Navigator.
- Fixed issue with missing login info in Navigator if the user is logged through the CLI.
- Numerous other bug fixes and improvements.

1.10.0 – October 19, 2020

- Improved Team Edition integration: you can now log in to your Team Edition account from Anaconda Navigator.

  More details at: *Connecting Navigator to other repositories*
- Navigator will now remember the last environment used instead of loading the default environment each time.
- Added a feature to scale Navigator fonts and items if Operating System scaling factor was changed.
- Improved user login experience by separating Anaconda.org, Team Edition, and Repo4 Enterprise.
- Extended Navigator settings/preferences by adding the following functionalities:
  1. Modified Conda configuration file (**.condarc**) directly from Navigator.
  2. Modified Navigator settings file (**anaconda-navigator.ini**) directly from Navigator.
  3. Set up separate API domain names for **anaconda.org / Team Edition / Repo4 Enterprise**.
  4. Set PyCharm and VSCode file paths.
  5. Added scroll bar for better user experience and other improvements.

  See: *Overview*
- Added a banner to the navigation pane to show you the most relevant news and tools.
- Fixed bug with the Navigator Updater tool:

  The bug was a part of the 1.9.12 release, so users will not be able to update from 1.9.12 to 1.10.0 through this tool. You will need to use the terminal or install 1.10.0 from our official website.
- Added tiles for PyCharm Pro and PyCharm Community/Datalore/IBM Watson Studio Cloud to the **Home** page.
- Fixed bug with missing **Visual Studio Code** tile on the **Home** page.
- Fixed bug where the environment would become stuck while installing packages.
- Fixed bug where Navigator would hang while loading applications.
- Numerous other bug fixes and improvements.

1.9.12 – February 10, 2020

- Added PyCharm Tile to the **Home** page when installed.
- Added Anaconda Prompt, Anaconda PowerShell tiles on the **Home** page (Windows only).
- Now displays pip-installed packages in environments.
- Improved the macOS Catalina experience with Navigator, around granting permissions to the various applications Navigator launches.
- Numerous bug fixes.

1.9 – October 2, 2018

- Added support for Offline Mode for all environment-related actions.
- Added support for custom configuration of main windows links.
- Numerous bug fixes and performance enhancements.

1.8 – February 28, 2018

- Removed **Projects** page.
- Now supports environment names with spaces on Windows.
- Improved switching between Anaconda API domains.
- Better integration with Visual Studio Code.
- Numerous bug fixes and performance enhancements.

1.7 – February 13, 2018

- Added R and MRO documentation tiles.
- Added custom spinner.
- Better handling of Access Denied errors.
- Better integration with Visual Studio Code.
- Numerous bug fixes and performance enhancements.

1.6 – May 19, 2017

- Better logging for application launches.
- Package list can be filtered by "to be installed".
- Selecting an environment on the **Home** or **Environments** page now selects it on both.
- Numerous bug fixes and performance enhancements.

1.5 – March 2, 2017

- New **Projects** page for working with Anaconda Projects, still in beta status.
- Added Navigator Updater and increased visibility of available updates.
- Numerous bug fixes and performance enhancements.

1.4 – January 31, 2017

- Navigator is out of beta status.

  The word "Beta" no longer appears in the title bar.

- R Studio available from the Navigator **Home** page.

  R Studio is an open-source integrated development environment (IDE) for the R programming language. R Studio has been added to the R channel and can now be installed and launched from the Navigator **Home** page. To install and launch R Studio, in the R Studio pane, click **Install** and then **Launch**.

- Orange app returns to the **Home** page.

  Orange app was removed from version 1.3 due to compatibility issues that have since been resolved. Orange app is pre-installed starting from version 1.4, so you can click **Launch** to launch it, with no need to install it first.

- Option to disable or enable SSL verification.

  From the top menu bar, select **Preferences**, select or clear the **Enable SSL verification** checkbox, and click **Apply**.

- Support for Anaconda Fusion licenses.

  Navigator now supports packages that require a license, including Anaconda Fusion. Installing Anaconda Fusion now automatically downloads a Fusion trial license from anaconda.org. This license is generated once per user, so if a user uninstalls Fusion and reinstalls it, the user receives the original license. Trial licenses require users to register for a free account on anaconda.org.

- Correct display of "no arch" packages.

  When Navigator installs "no arch" packages, they now appear correctly on the **Environments** page.

- Friendly warning about updating channels for long-term users.

  If users have created `.condarc` files that try to access binstar.org–the original name of anaconda.org–Navigator now warns that binstar.org channels are outdated.

1.3 – September 27, 2016

- License Manager dialog.

  You can now easily upload licenses for applications that require them.

- Applications per environment.

  You can install applications to any environment. To do this, on the **Home** page, click **Applications**, then select the environment in which you want to install an application. If an environment is not selected, applications are installed by default in the root environment.

- One-click updates and installs.

  You can install a new package or update an installed package in the active environment. See *Managing packages*.

- Clearer indication of option to delete a search filter.

  On the **Environments** page, when the packages are filtered by a user-defined search string, hovering over the X button now turns the cursor into an arrow and the X turns red,to emphasize that clicking the X will clear the search string.

- Channels now support tokens.

  The Channel manager now supports security tokens. See *Adding a channel in Navigator*.

- Channel name copy and paste support.
- Navigator in a specific environment.

  Installing Navigator in an environment other than root now makes that environment the default upon Navigator startup, both for the **Home** and **Environments** pages.
- Table pre-filtering according to Python version.

  To avoid unnecessary conflicts, the table that displays a filtered view of packages–according to the Installed, Not Installed, Upgradeable and Downgradable filter values–does not display packages that are incompatible with the installed version of Python.
- Dialog size restore.

  Upon restart, the application window's last size and location are preserved, instead of the windows being maximized upon startup.

1.2 – August 1, 2016

- Improved `.condarc` support.

  Navigator now reads from and writes to the conda configuration file (`.condarc`). In previous releases, updates made within Navigator to the conda configuration were not reflected in the `.condarc` file, and vice versa. Starting from version 1.2, when you add channels inside Navigator, the `.condarc` file is updated, and if `.condarc` is updated outside Navigator, Navigator correctly reads the available channels.
- Improved channels support.

  You can now *manage the channels* on anaconda.org that you want Navigator to consider active. Active channels are included when you search for packages and other assets.
- R environment creation support.

  Navigator now allows you to *install a standalone R language environment or a mixed Python and R environment*.
- Conda environment file import.

  Navigator now allows you to *import environment.yml files*.
- Updates for Enterprise users.

  Note: You cannot use an Enterprise version of anaconda.org with Navigator.

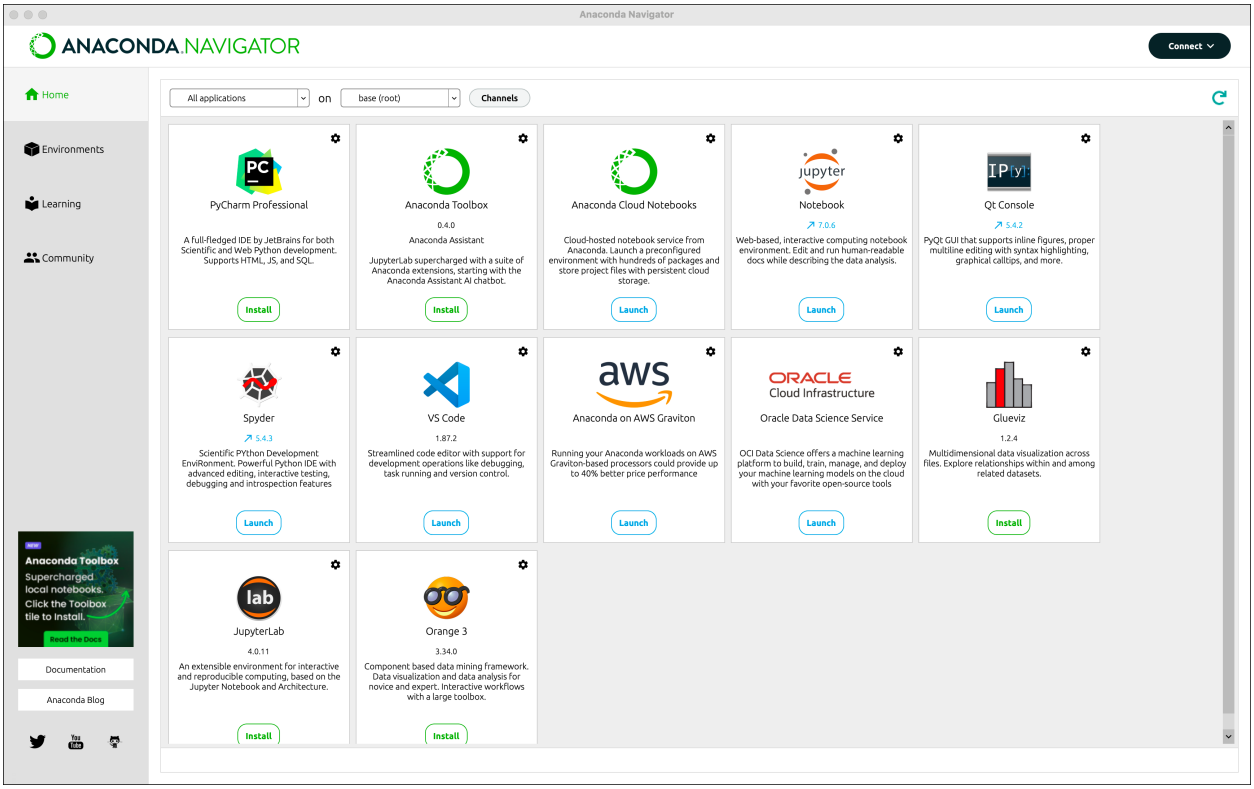
  – Simplified preferences.

  Preference options are simplified so that only one URL is needed to set up the API. Changing this value affects the URL setting of the anaconda-client configuration.

  Note: Changing the *URL setting in the CLI* affects the value displayed in the preferences.

  – Proxy.

  When using Navigator behind a proxy, the settings must be manually set inside the conda configuration file. See the conda proxy documentation.



Why use Navigator?

In order to run, many scientific packages depend on specific versions of other packages. Data scientists often use multiple versions of many packages and use multiple environments to separate these different versions.

The CLI program conda is both a package manager and an environment manager. This helps data scientists ensure that each version of each package has all the dependencies it requires and works correctly.

Navigator is a graphical interface that enables you work with packages and environments without needing to type conda commands in a terminal window. You can use it to find the packages you want, install them in an environment, run the packages, and update them – all inside Navigator.

What applications can I access using Navigator?

For information on what applications are available by default in Navigator, see *Home page*.

Advanced conda users can also *build their own Navigator applications*.

How can I run code with Navigator?

The simplest way is with Spyder. From the Navigator Home page, click the Spyder tile, and use the Spyder interface that opens to write and execute your code.

You can also use Jupyter Notebook the same way. Jupyter Notebook is an increasingly popular system that combines your code, descriptive text, output, images, and interactive interfaces into a single notebook file that is edited, viewed, and used in a web browser.

Note: Anaconda Navigator does not support macOS<10.12.

2.18.7 Anaconda Notebooks

Start coding immediately

Anaconda Notebooks allows anyone, anywhere to begin their data science journey. Spin up awesome data science projects directly from your browser with all the packages and computing power you need.

Code from anywhere

Log in and pull up conda configurations wherever you are online. Whether you want to upload a local environment or directly manage packages in the notebook — Anaconda's got you covered.

Secure file storage

Liberate those files from your hard drive and securely store all your notebooks, projects, and scripts directly in your file directory.

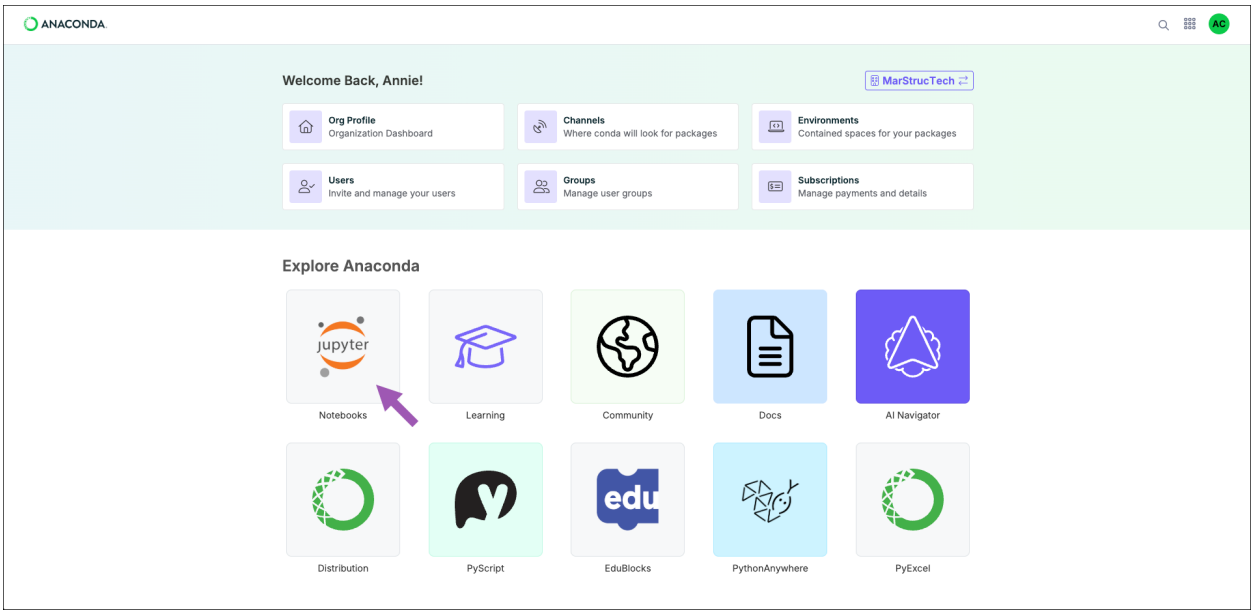
With Anaconda Notebooks, you get all of the following running on our resilient and supported cloud platform, so you can use it anywhere on any device!

Capabilities	Free	Starter	Pro*/Business	Enterprise
A dedicated JupyterLab notebook interface	✓	✓	✓	✓
Fast, backed-up SSD storage	5GB†	10GB	20GB	Unlimited
CPU seconds (daily)	1,000	8,000	20,000	Unlimited
Published applications	1	4	10	Unlimited
Number of Assistant chats per day	30	60	120	Unlimited
Conda environments with the most popular python packages	✓	✓	✓	✓
Ability to create and upload your own custom environments	✓	✓	✓	✓
Example notebooks	✓	✓	✓	✓

Note: * Pro is a legacy tier no longer available for purchase.

Warning: † Files associated with Free accounts will be deleted if the account is inactive for over six months. We encourage Free tier users to either periodically log in to Anaconda Notebooks or download (**File** > *Download*) a copy of their notebooks to ensure their files are preserved.

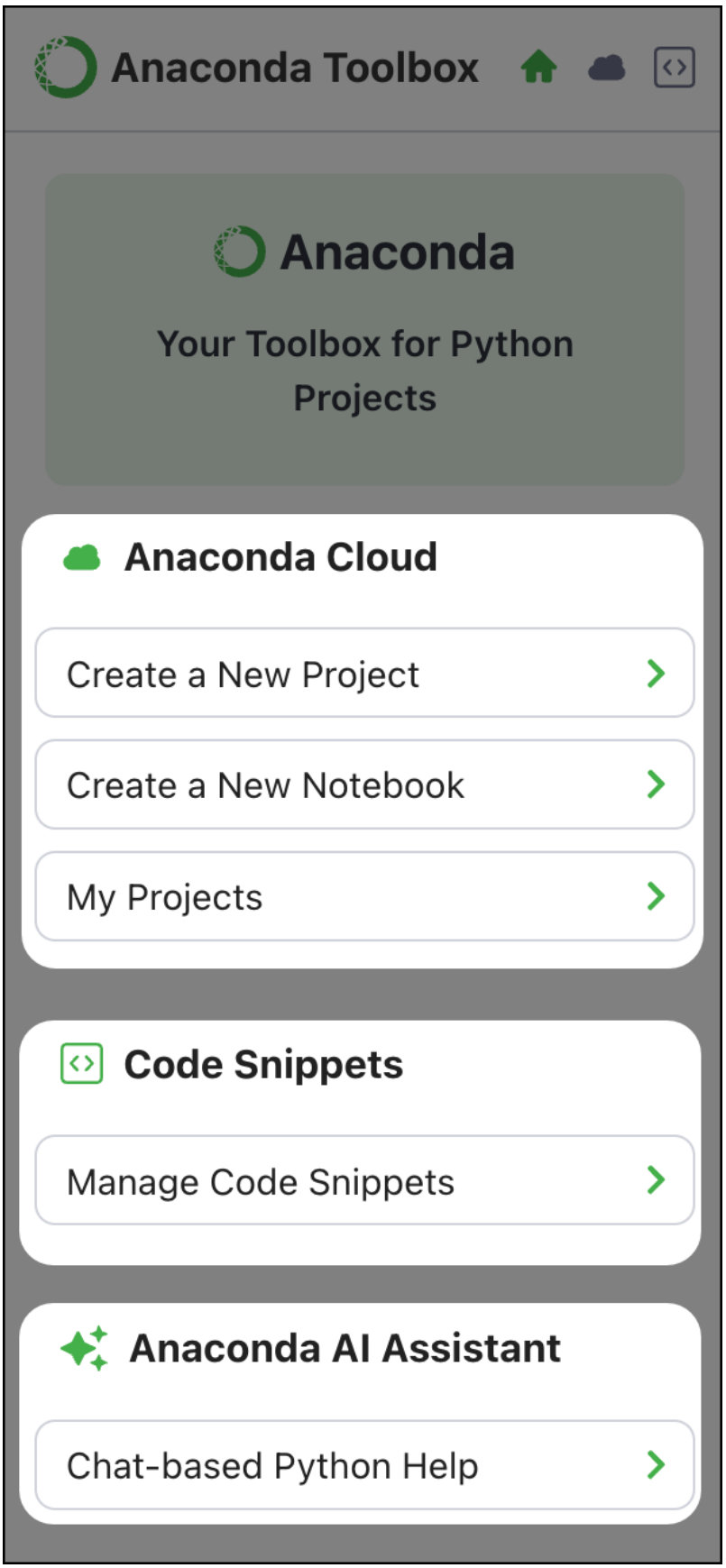
Try it out for yourself by launching Notebooks from Anaconda Cloud!



Anaconda Toolbox

Anaconda Toolbox is a built-in extension for Anaconda Notebooks that enhances your coding experience with extended coding capabilities. Quickly generate, save, and share code across Notebooks and Excel, and get help from our Anaconda Assistant, learning Python as you go.

Let's take a look at the different elements within Anaconda Toolbox.


Anaconda Toolbox
Anaconda
Your Toolbox for Python Projects
Anaconda Cloud
Create a New Project
Create a New Notebook
My Projects
Code Snippets
Manage Code Snippets
Anaconda AI Assistant
Chat-based Python Help

Anaconda Cloud

Create new projects and notebooks that can be securely uploaded to *Anaconda Cloud*, shared with teammates in your organization, and accessed on any machine with Anaconda Notebooks or Microsoft Excel.

Code Snippets

Write reusable *code snippets* that can be saved to your Anaconda Cloud projects and then used across notebooks, added to Excel workbooks, and shared with teammates.

Anaconda AI Assistant

Use *Anaconda Assistant* to help you write, analyze, and debug code right within your notebooks.

Using Anaconda Cloud projects

Anaconda's cloud storage solution provides you with greater access to your files across your workspace. By securely uploading your CSVs, notebook files, code snippets, and more to projects in Anaconda Cloud, you can access your files from any machine with Excel and internet access.

What are projects?

You can think of projects as folders for storing your data files, which allow you to:

- Access your stored `.csv` files or code snippets from either Anaconda Notebooks or *Excel*
- Keep related `.csv` and `.ipynb` files organized
- Execute bulk actions, such as uploading, downloading, and deleting files
- Set default environment kernels

For example, you can create a `.csv` file in Excel, *upload it to Anaconda Cloud*, then pull that `.csv` data directly into a notebook in Anaconda Notebooks!

Creating a project

Create a project using the following steps:

1. Open Anaconda Toolbox.
2. Under **Anaconda Cloud**, click **Create a New Project**.
3. Enter a unique title for your project.
4. Select an environment for your project from the **Environment Location** dropdown.
5. Upload files to your project, or transfer files already saved in Anaconda Cloud.

   > **Note:** You can upload any file type to your project, but the best options are `.csv` and `.ipynb` files under 100MB.

6. Click **Create Project**. Your project appears under **My Projects**.

Tip: Save your new project and files by *pushing your project* to Anaconda Cloud.

Uploading files to a project

Add files to a project using the following steps:

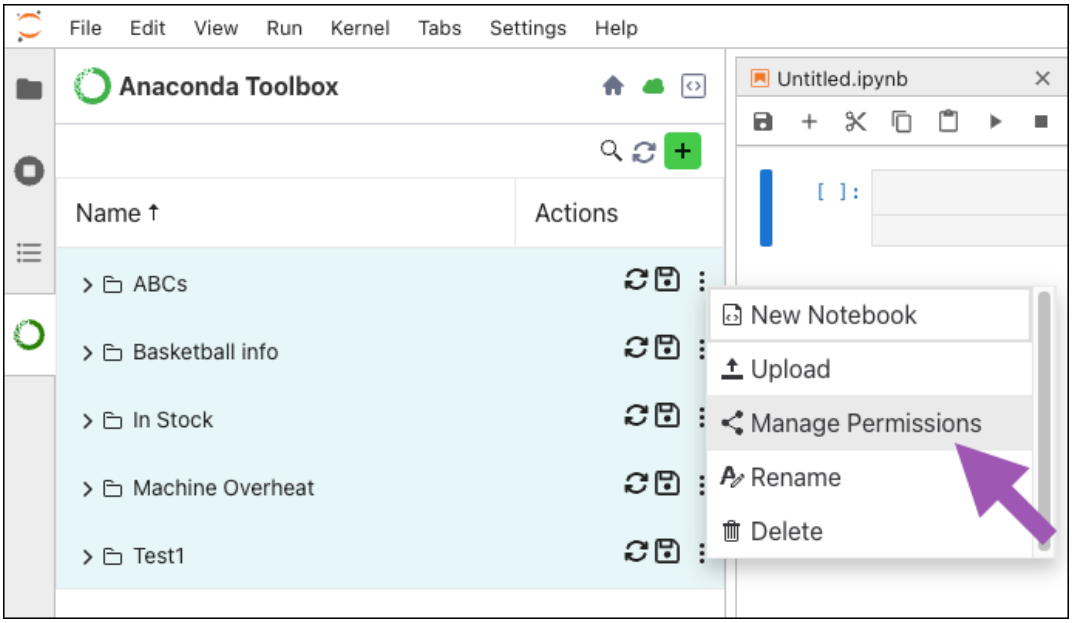
1. Open Anaconda Toolbox.
2. Under **Anaconda Cloud**, click **My Projects**.
3. Click actions beside the project, then click **Upload**.
4. Upload files to your project, or transfer files already saved in Anaconda Cloud.
5. Click **Upload to Project**.

The file(s) appear in the project.

Sharing a project

You can share projects you own with other users in your organizations using the following steps:

1. Under **Anaconda Cloud**, click **My Projects**.
2. Click actions beside the project you want to share, then click *Manage Permissions*.



3. In the Manage Permissions dialog, select your organization from the dropdown under **Your Organizations**.

Note: Sharing projects with other users is only possible through a shared organization. To share with someone who is not a member of your organization, create a new organization for that user to join by clicking **Create new organization** beneath the organizations dropdown.

4. Under **Organization Users**, enter the email of the user(s) you want to share the project with, then click **Invite**.

5. Choose each user's *permission level*.
6. Click **Update Permissions**.

The user(s) then receive an email notifying them of the update to their permission level on your project and a link to Anaconda Notebooks.

Permissions

Access to projects and the actions you can perform in them are determined by your permission level for the project. By default, you as the owner of your project have admin permissions; for projects owned by an organization, the admins of that organization have admin permissions for that project.

Permission level	Actions
Read	View, download
Edit	View, download, upload
Admin	View, download, upload, share, delete

Creating a new notebook

Begin creating a new notebook from either the home page or directly in a project from **My Projects**:

Home Page

1. Click **Create a New Notebook**.
2. Enter a unique name for your notebook.
3. Select a project to store your notebook in.

My Projects

1. Click **My Projects**.
2. Click actions beside a project, then click **New Notebook**.
3. Enter a unique name for your notebook.
4. Click **Create Notebook**. Your new notebook opens.
5. Select the kernel for your notebook in the **Assign a Kernel** dialog, then click **Assign**.

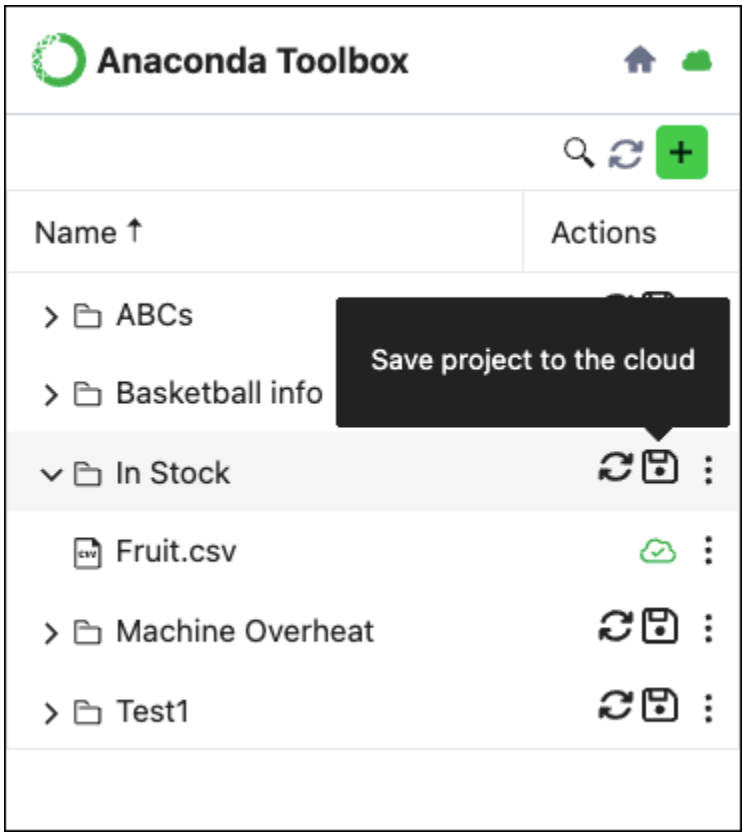
> **Tip:** To always use the same kernel and prevent the dialog from appearing when creating a notebook, select the checkbox beside "Always start the preferred kernel".
>
> To remove a project's preferred kernel, open an associated notebook, click the kernel in the top-right corner, and uncheck "Always start the preferred kernel". Alternatively, go to **Settings**, select *Settings Editor*, select *Notebook* from the left sidebar, and clear "Automatically Start Preferred Kernel".

You can now begin working in your new notebook.

Syncing projects to Anaconda Cloud

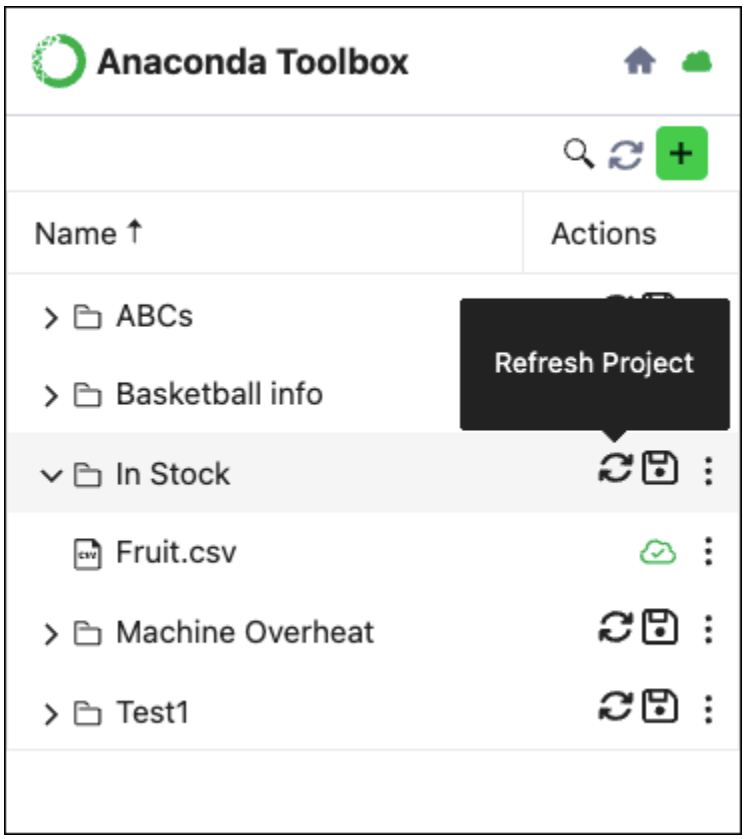
While it's best practice to save your work as you go, an extra step is required to ensure your project files are securely uploaded to the cloud for easy retrieval and use on other machines and software.

Save a project to Anaconda Cloud by clicking **Save project to the cloud** beside the project title.



Sync your local projects with those stored on Anaconda Cloud by clicking **Refresh Project** beside the project title.

> **Warning:** Refreshing your project(s) will synchronize your local files with those stored on Anaconda Cloud, *overwriting your local project files*. Make sure to save your projects to the cloud before refreshing to avoid losing any progress.



Tip: Refresh all projects at once by clicking **Refresh all projects** at the top of **My Projects**.

Working with Code Snippets

Code Snippets enable you to securely upload reusable blocks of code to Anaconda Cloud. You can then share your snippets with other users, access your snippets in *Excel*, and insert your snippets across notebooks.

Anaconda maintains a Jupyter notebook that includes example code snippets you can modify and add to your own projects:

Creating Code Snippets

Create a Code Snippet using the following steps:

1. Enter your code in an empty notebook cell.
2. Click **Create a New Code Snippet** in the cell toolbar.
3. Enter a name for your code snippet.
4. Select a project to house your snippet.

> **Note:** If you don't have any projects, a new project with the code snippet name as the title will be created.

5. Click **Create Code Snippet**.

A new `.py` file with the code snippet's name appears in the project and is ready to be used across your notebooks. Save the project by *pushing your project* to Anaconda Cloud to share your snippets across devices and software.

Sharing a snippet

You can share a snippet with others in your organization by *sharing the project* that contains the snippet.

Inserting snippets in a notebook

When you're ready to use a saved snippet, insert it in a notebook using the following steps:

1. Open Anaconda Toolbox.
2. Under **Code Snippets**, select **Manage Code Snippets**. Alternatively, under **Anaconda Cloud**, select **My Projects**.
3. You can now insert your snippet in one of two ways:

Insert in cell

1. Select a cell in the notebook where you'd like to insert the code.
2. Click **Insert code snippet in notebook** beside the code snippet.

The code snippet appears in a new cell below the selected cell. If no cell was selected, the code snippet appears in the last cell of the notebook.

Copy code

1. Click actions beside the code snippet, then click **Copy to Clipboard**.
2. Select a cell in the notebook where you'd like to insert the code.
3. Paste the code into the cell.

Editing a snippet

To edit a snippet, you must make changes to the snippet directly in the Anaconda Toolbox extension.

1. Open Anaconda Toolbox.
2. Under **Code Snippets**, select **Manage Code Snippets**. Alternatively, under **Anaconda Cloud**, select **My Projects**.
3. Double-click the snippet's `.py` file to open the file.
4. Adjust your snippet.
5. To save your file changes, go to **File**, then select *Save Python File*.

You can now use your updated snippet across your notebooks. However, you'll need to *push the associated project* to make the changes available in Anaconda Cloud.

Anaconda Assistant

Anaconda Assistant is your digital pair programmer for data science in Anaconda Notebooks! Made for novice and intermediate JupyterLabs notebook practitioners—yet handy for users of all levels—this AI assistant can help you:

- Write and debug code
- Analyze data
- Visualize results

The number of prompts you can make to the Assistant per day differs based on your tier:

Capabilities	Free	Starter	Pro*/Business	Enterprise
Number of Assistant chats per day	30	60	120	Unlimited

Note: * Pro is a legacy tier no longer available for purchase.

Follow this quickstart guide to learn how to make the most of your Anaconda Assistant.

Starting with a notebook

Anaconda recommends using the Assistant after you've loaded a DataFrame in your notebook.

Note: Throughout the Assistant, *DataFrames* refer to Pandas DataFrames only, though certain dataframe types compatible with Pandas DataFrames could work as well.

This can be done in a few different ways:

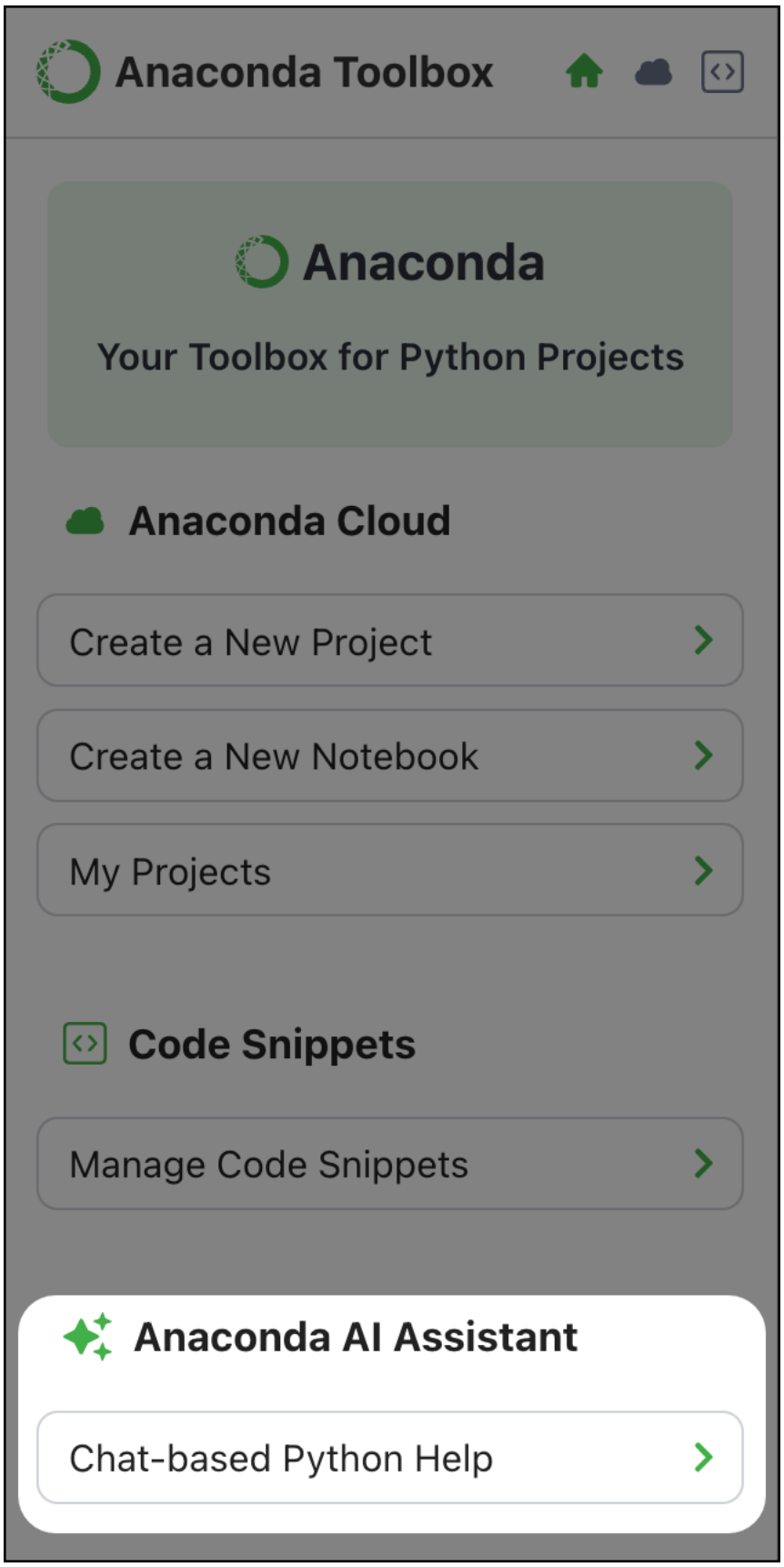
- If you're starting with an empty notebook, the Assistant provides you with the option to generate a DataFrame with random data, which you can then use to generate graphs and more.
- Use Anaconda data catalogs as a starting point:
  1. Open a new Launcher by clicking the blue plus **+** in the top-left corner.
  2. In the Launcher, under Anaconda Data Catalogs, click Explore Catalogs.
  3. Click **Run All Cells** to restart and run all the cells available in your notebook. This will render the DataFrame(s) in the notebook.
- If you already have specific data you'd like to work with and a proficiency in Jupyter Notebooks, import the data and generate a DataFrame as you normally would.

Accessing the Anaconda Assistant

There are a few methods you can use to access the Anaconda Assistant:

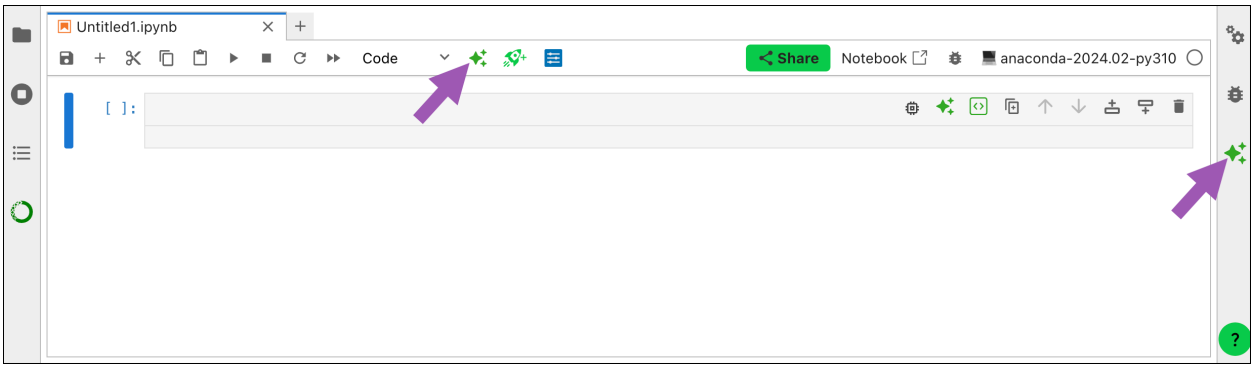
Anaconda Toolbox

Click **Chat-based Python Help** in Anaconda Toolbox.


Anaconda Toolbox
Anaconda
Your Toolbox for Python Projects
Anaconda Cloud
Create a New Project
Create a New Notebook
My Projects
Code Snippets
Manage Code Snippets
Anaconda AI Assistant
Chat-based Python Help

Toolbar Icons

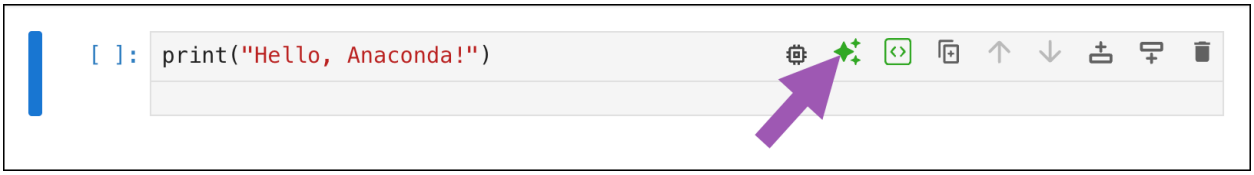
Click **Anaconda Assistant** on the right of your active notebook or the command toolbar at the top of your active notebook.



Cell Assistant

Click **Anaconda Assistant** in the cell toolbar or **right-click** within an active cell to display Assistant quick prompts.

Use quick prompts for the entire cell or selected lines of code within the cell.

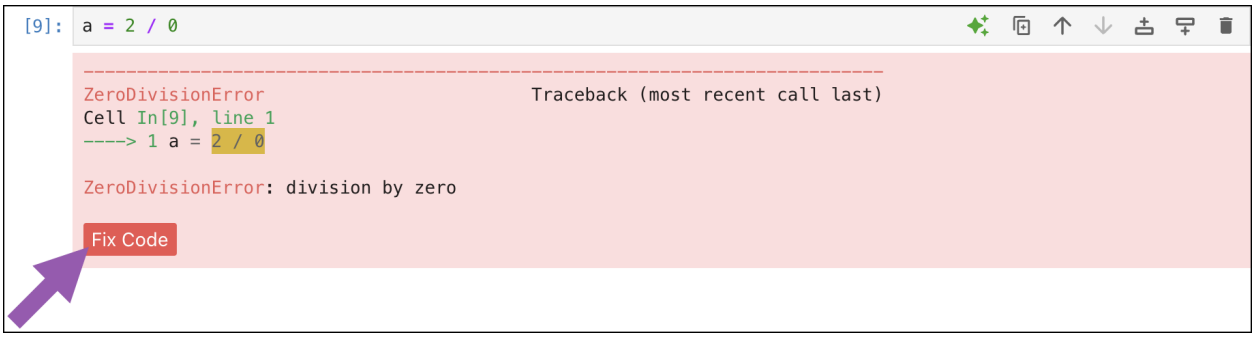


Keyboard Shortcut

Use the keyboard shortcut Ctrl+Shift+A (Windows)/Cmd+Shift+A (Mac).

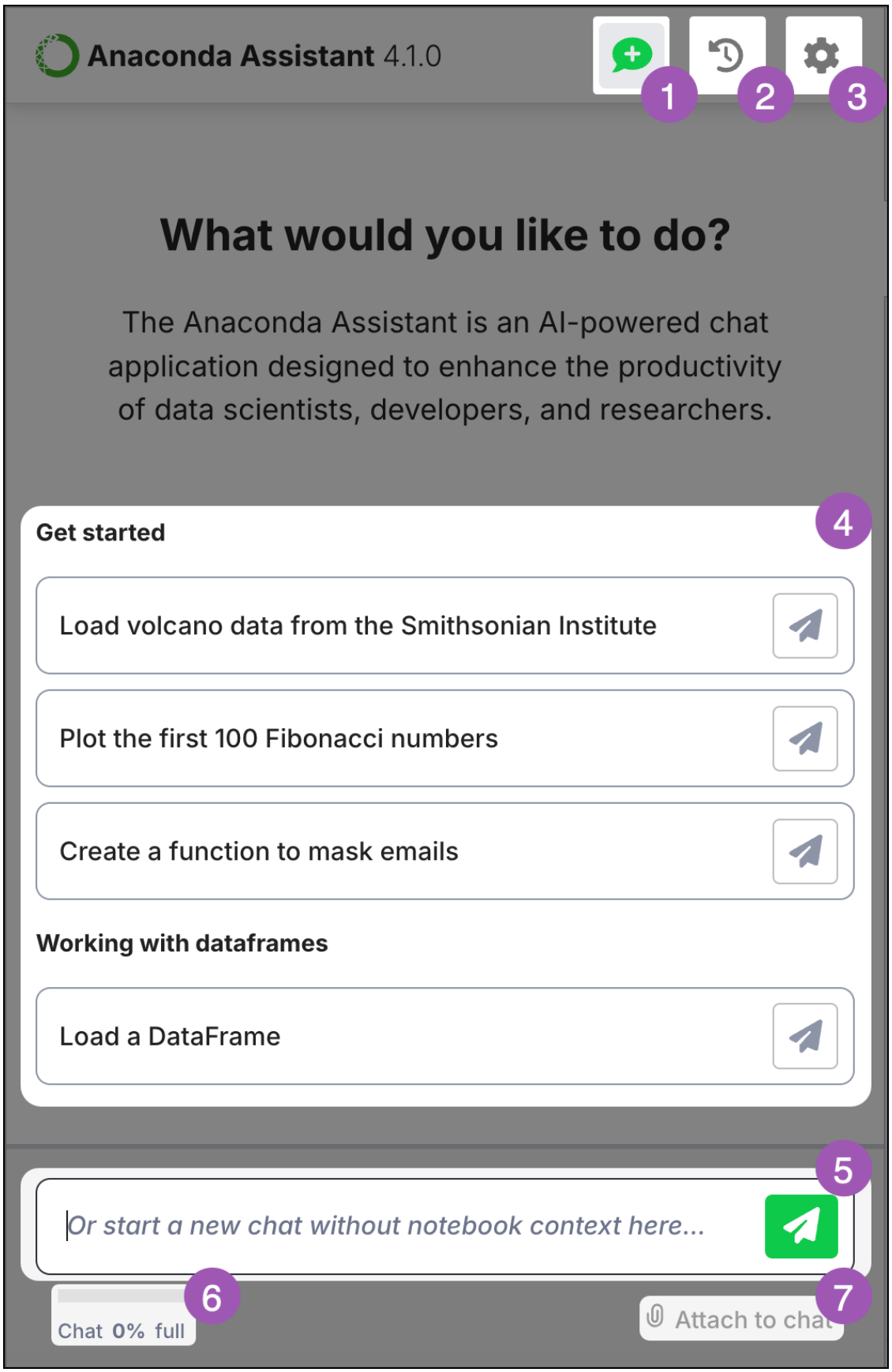
Access Anaconda Assistant from the traceback

In addition to the methods above, you can ask Anaconda Assistant for help with coding errors directly from the traceback. Click **Fix Code** at the bottom of the traceback to open Anaconda Assistant and receive help with the code that caused the error.



Using the Anaconda Assistant

Let's take a look at the different parts of the Assistant and what we can do with this tool.


Anaconda Assistant 4.1.0
1
2
3
What would you like to do?
The Anaconda Assistant is an AI-powered chat application designed to enhance the productivity of data scientists, developers, and researchers.
Get started
4
Load volcano data from the Smithsonian Institute
Plot the first 100 Fibonacci numbers
Create a function to mask emails
Working with dataframes
Load a DataFrame
5
Or start a new chat without notebook context here...
6
Chat 0% full
7
Attach to chat

1. **Start a new chat**
   At any time, you can start a new Assistant session, or "chat," by clicking **New chat**.
2. **History of previous chats**
   View and return to previous chats by clicking **Chats history**.
3. **Settings**
   Adjust where code is run in the notebook, enable or disable data collection and usage, and upgrade your account by clicking **Settings**.
4. **Assistant tasks**
   The Assistant allows you to perform a variety of functions, which are covered in the following section.
5. **Text box**
   Ask your own questions and make unique requests using the text box at the bottom of the Assistant.
6. **Chat limit used**
   Currently, each new chat allows a set amount of requests per 24 hour period. You may encounter a warning message when you reach the daily limit.
7. **Attach to chat**
   Add data for the Assistant to analyze and manipulate (in development).

Get started

Explore code for various math equations and python projects independent of your notebook. Whether you're starting from scratch or looking to take your project in a new direction, the code examples in this section can serve as much needed inspiration.

Build upon results by asking for deeper analysis or changes to the code using plain English. Make sure you provide specific instructions to the assistant! The more specific you are, the better your results will be.

Working with DataFrames

For notebooks containing DataFrames, the Assistant provides various methods for viewing and interacting with your data in a new way.

Note: **Load a DataFrame** is the only option that will appear in this section if your notebook lacks a Pandas DataFrame. Running code to generate a DataFrame will trigger the availability of the other options.

Load a DataFrame

If you're starting with an empty notebook, this option will open a menu of DataFrames for you to load in your notebook, which you can then use to generate a wide variety of graphs. You can also ask questions about the generated code and request changes using plain English. Remember to be specific!

Generate a graph for the DataFrame

This option generates a graph based on the DataFrame(s) in your notebook. If your notebook contains more than one DataFrame, you're prompted to select which DataFrame you want to generate a graph for.

Click **Get Code** to have the Assistant provide you with a list of various types of graphs (bar, heatmap, etc.) it can generate based on the data in the DataFrame. You're also presented with the code for generating the graph described in the first option listed, which you can then run in the notebook by clicking **Run in Notebook**, or you can copy the code to paste it yourself by clicking **Copy**.

If you want code for a different graph, or to see a new set of possibilities, use the text box to choose which graph you would like generated. Type something like the following:

- Generate the second idea
- Make a chart of #3, please
- Give me new options!

Describe the data in the DataFrame

Analyze and visualize data more efficiently by having the Assistant generate a summary of—and potential use cases for—your DataFrame. This can be a great source of inspiration when you're struggling to clearly explain the value your data provides.

Ask follow-up questions to dive deeper into the results. For example, if you find an interesting trend in your data, you can ask the Assistant to further refine the analysis or provide recommendations.

Suggestions for cleaning data

The Assistant can provide various means for "cleaning up" your DataFrame by standardizing inconsistent information, removing duplicates, checking for missing values, and more. If your notebook contains more than one DataFrame, you're prompted to select which DataFrame you want to clean.

For a brand new set of suggestions, click **Refresh Suggestions** at the top of the Assistant.

More suggestions...

The Assistant can provide you with ideas for building upon your DataFrame, such as creating new visualizations, filtering based on specific conditions, removing unnecessary information, or even merging the DataFrame with an entirely new DataFrame.

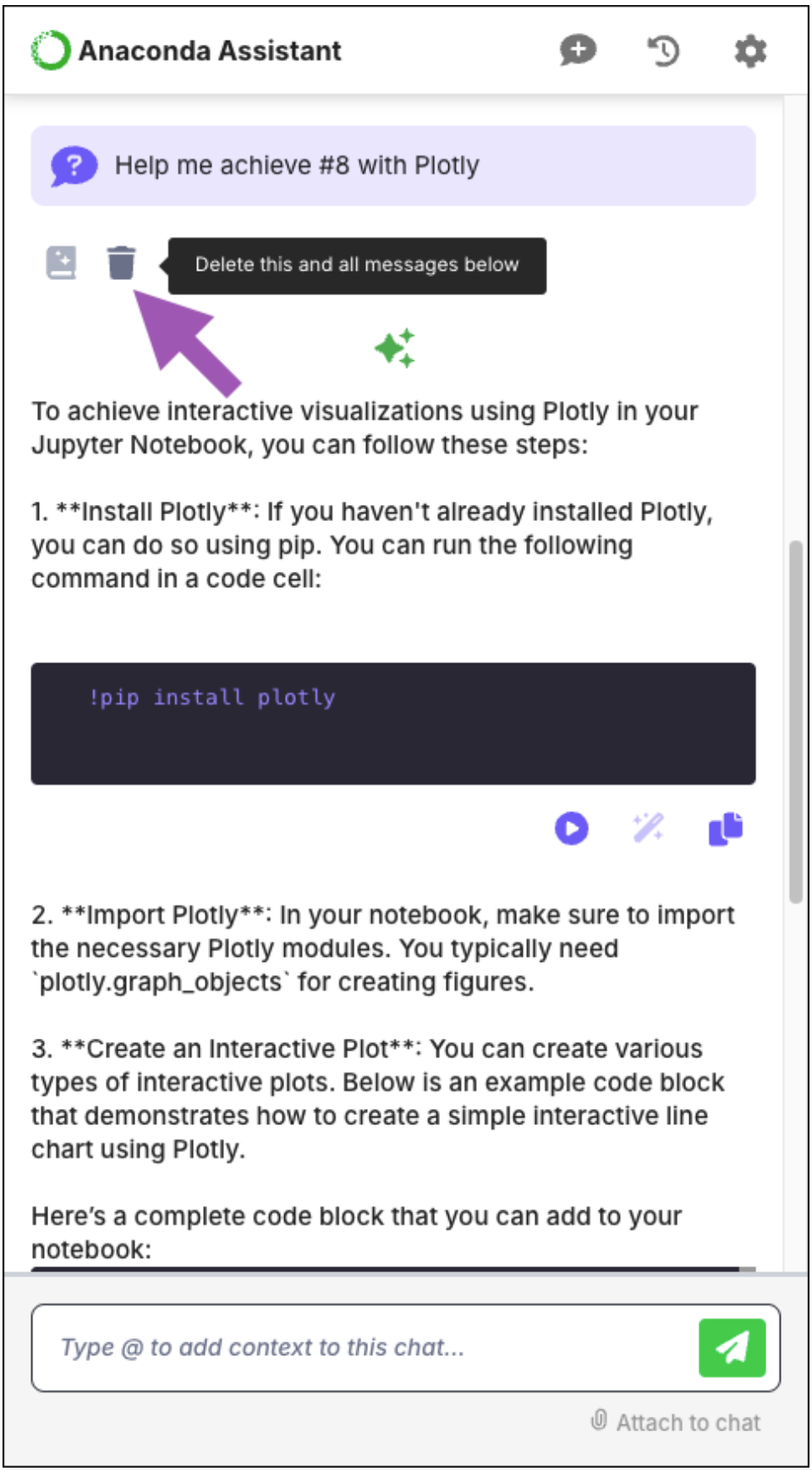
For a brand new set of suggestions, click **Refresh Suggestions** at the top of the Assistant.

Enhancing the Assistant experience

This section provides tips on improving your working experience with the Assistant.

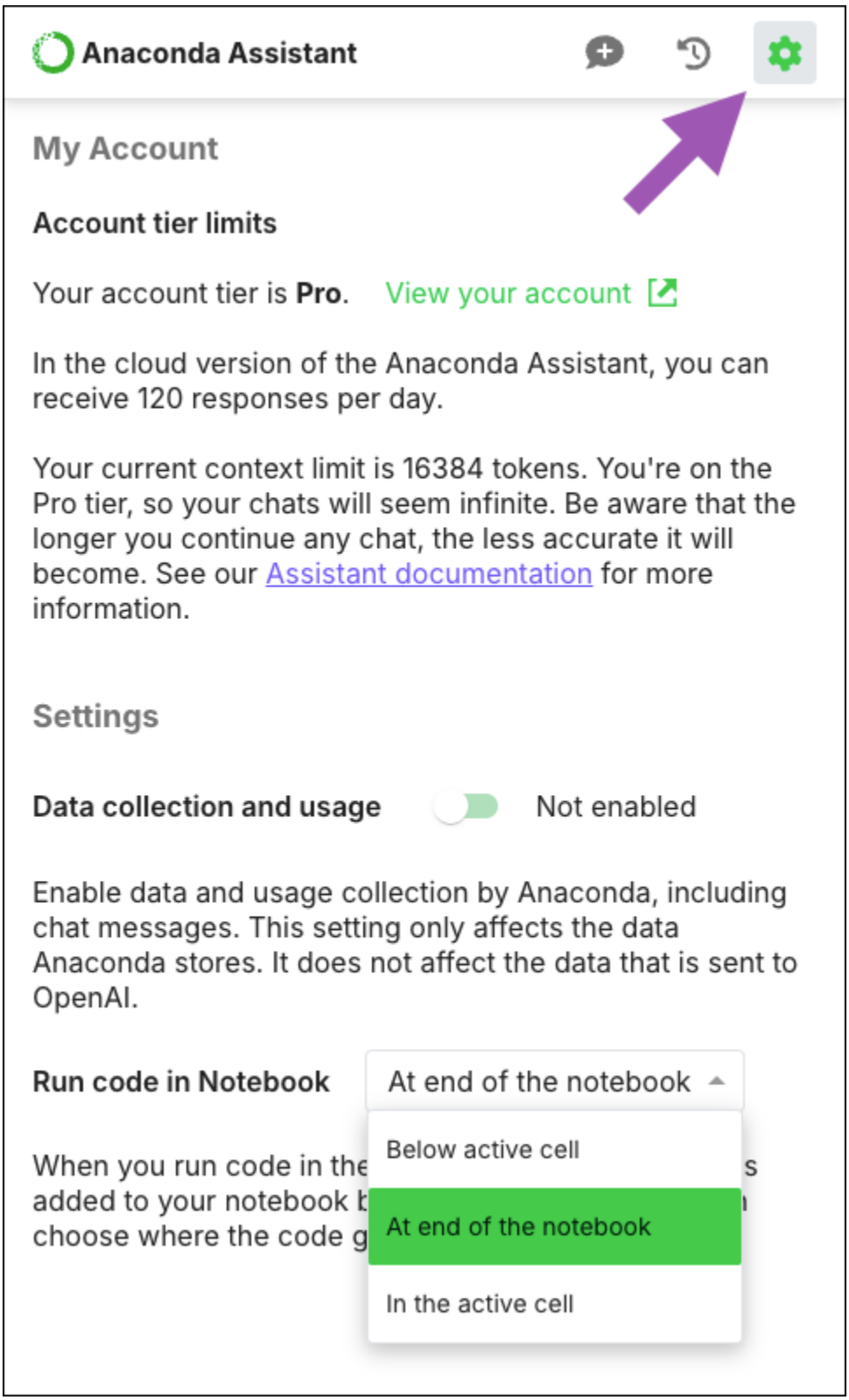
Course correcting the conversation

Sometimes, generative AI systems can encounter challenges when processing long conversations, leading to a decline in the quality of responses. If you find that the conversation is becoming less helpful to you, don't worry! Instead of restarting the entire conversation and losing the responses that *were* helpful to you, you can selectively remove messages by clicking **Delete this and all messages below** in the prompt. By pruning the conversation, you can seamlessly resume interaction with the Assistant from a point where responses were still valuable and relevant.


Anaconda Assistant
Help me achieve #8 with Plotly
Delete this and all messages below
To achieve interactive visualizations using Plotly in your Jupyter Notebook, you can follow these steps:
1. **Install Plotly**: If you haven't already installed Plotly, you can do so using pip. You can run the following command in a code cell:
!pip install plotly
2. **Import Plotly**: In your notebook, make sure to import the necessary Plotly modules. You typically need `plotly.graph_objects` for creating figures.
3. **Create an Interactive Plot**: You can create various types of interactive plots. Below is an example code block that demonstrates how to create a simple interactive line chart using Plotly.
Here's a complete code block that you can add to your notebook:
Type @ to add context to this chat...
Attach to chat

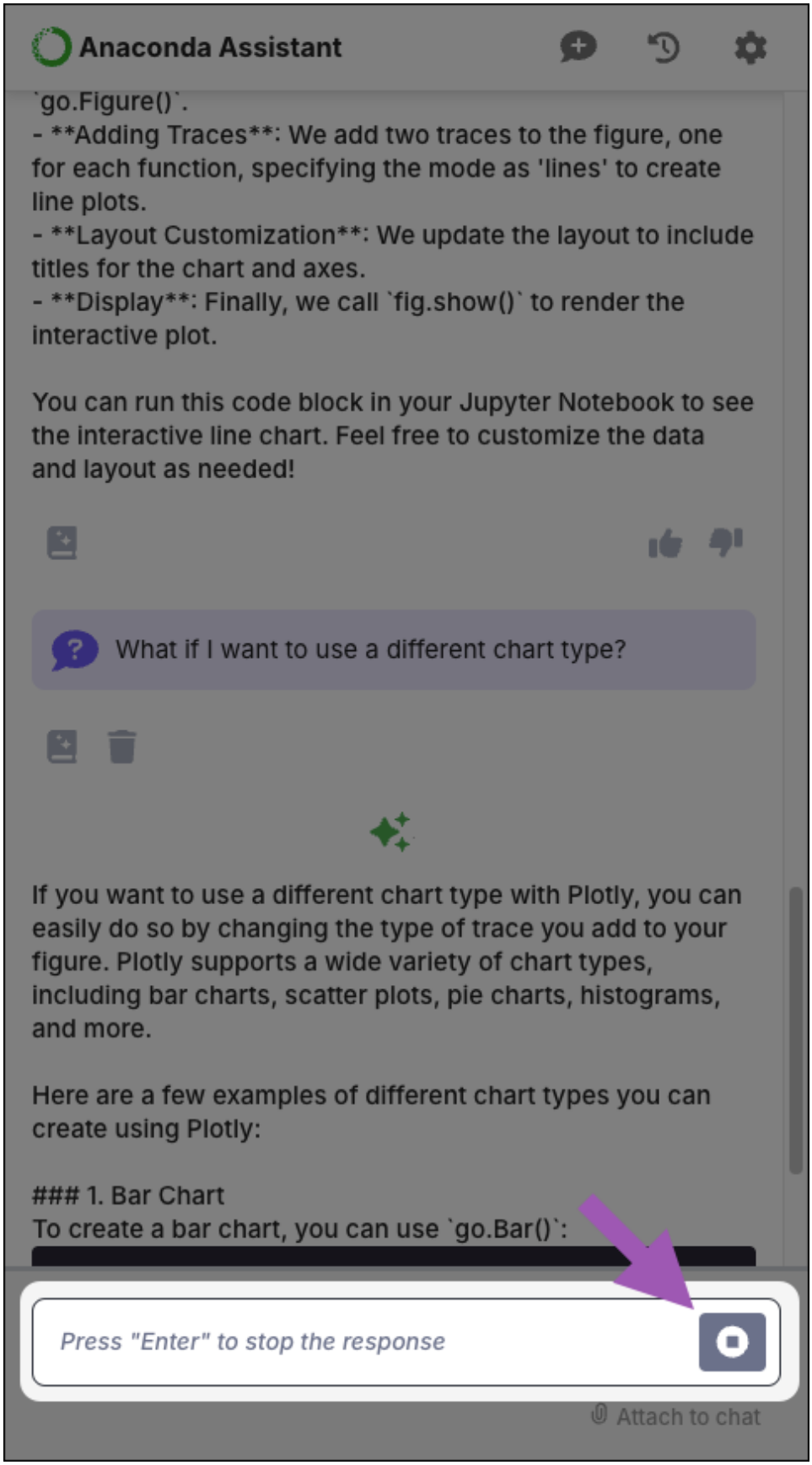
Setting code location

To change where code generated by the Assistant gets added to your notebook, click **Settings**. Then, under **Run code in Notebook**, select from the dropdown a location where code should be added and run in the notebook.


Anaconda Assistant
My Account
Account tier limits
Your account tier is Pro.
View your account
In the cloud version of the Anaconda Assistant, you can receive 120 responses per day.
Your current context limit is 16384 tokens. You're on the Pro tier, so your chats will seem infinite. Be aware that the longer you continue any chat, the less accurate it will become. See our Assistant documentation for more information.
Settings
Data collection and usage
Not enabled
Enable data and usage collection by Anaconda, including chat messages. This setting only affects the data Anaconda stores. It does not affect the data that is sent to OpenAI.
Run code in Notebook
At end of the notebook
When you run code in the
added to your notebook
choose where the code g
Below active cell
At end of the notebook
In the active cell

Stopping a response from the Assistant

If you want to interrupt the Assistant mid-response (perhaps the Assistant misunderstood your prompt and is providing unnecessary information), press Enter (Windows)/Return (Mac) on your keyboard. Alternatively, you can click **Stop** in the text box.


Anaconda Assistant
`go.Figure()`.
- **Adding Traces**: We add two traces to the figure, one for each function, specifying the mode as 'lines' to create line plots.
- **Layout Customization**: We update the layout to include titles for the chart and axes.
- **Display**: Finally, we call `fig.show()` to render the interactive plot.
You can run this code block in your Jupyter Notebook to see the interactive line chart. Feel free to customize the data and layout as needed!
What if I want to use a different chart type?
If you want to use a different chart type with Plotly, you can easily do so by changing the type of trace you add to your figure. Plotly supports a wide variety of chart types, including bar charts, scatter plots, pie charts, histograms, and more.
Here are a few examples of different chart types you can create using Plotly:
1. Bar Chart
To create a bar chart, you can use `go.Bar()`:
Press "Enter" to stop the response
Attach to chat

Frequently asked questions

Why am I not seeing all options under Working with DataFrames?

Some options for working with DataFrames are hidden until you run cells in your notebook that generate a DataFrame. Click **Run All Cells** to restart and run all the cells available in your notebook. If one or more DataFrames are successfully generated in your notebook, all options should appear in the Assistant.

What programming languages are supported?

Anaconda Assistant primarily supports Python, but we are planning to expand support to other languages in the future.

What personal data is collected when I use the Assistant?

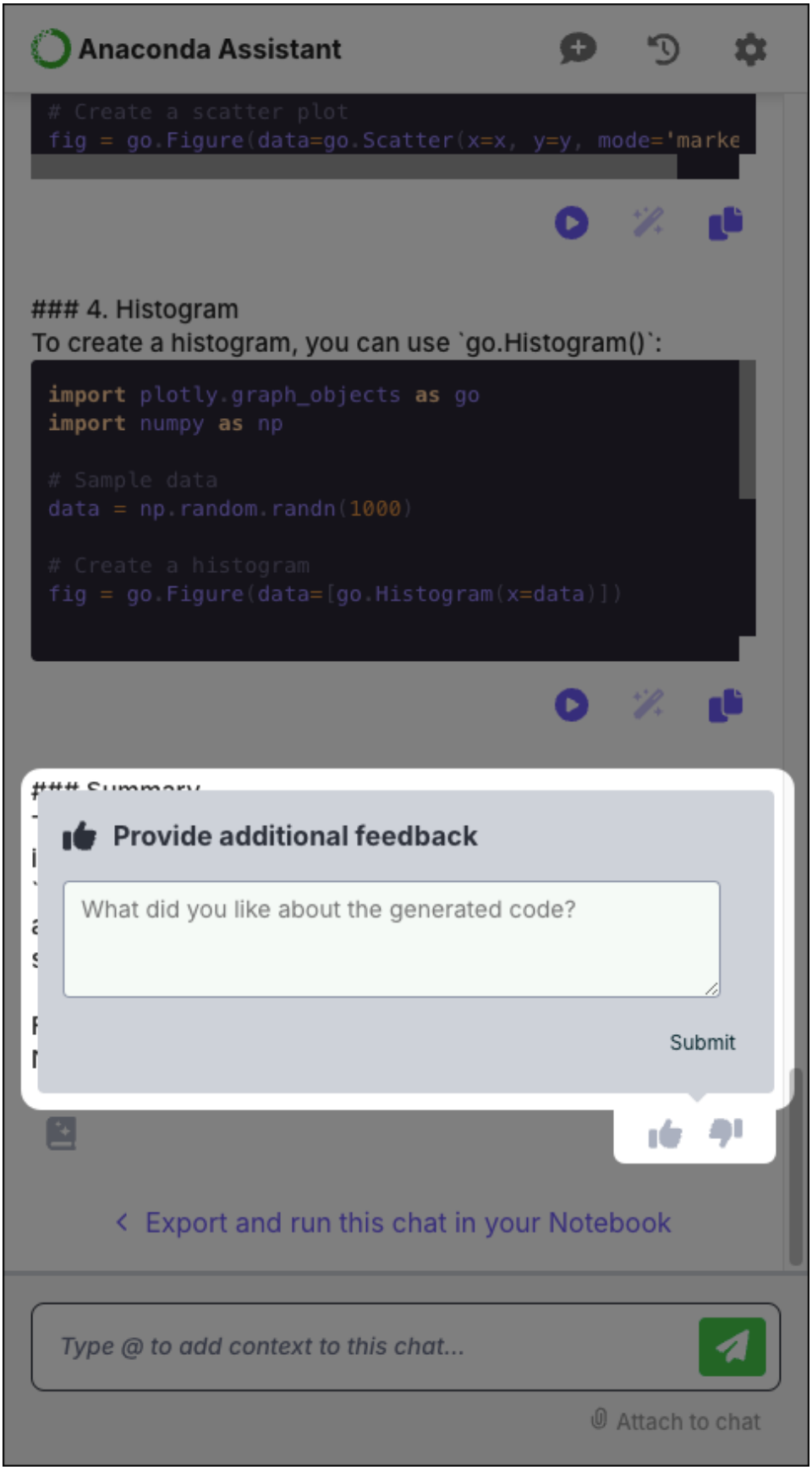
When you first use Anaconda Assistant, you are prompted to opt in to Anaconda's data collection and usage of chat messages. Whether or not you opt in, OpenAI's terms of use on data collection and usage still apply.

If you opt in, Anaconda collects all chat information, user IDs, and event logs.

If you opt out, Anaconda only collects event logs and your user ID—any prompts you have entered in the chat remain undisclosed.

How do I provide feedback?

Use the buttons embedded within the Assistant to provide positive or negative feedback:


Anaconda Assistant
# Create a scatter plot
fig = go.Figure(data=go.Scatter(x=x, y=y, mode='marke
4. Histogram
To create a histogram, you can use `go.Histogram()`:
import plotly.graph_objects as go
import numpy as np
# Sample data
data = np.random.randn(1000)
# Create a histogram
fig = go.Figure(data=[go.Histogram(x=data)])
Provide additional feedback
What did you like about the generated code?
Submit
Export and run this chat in your Notebook
Type @ to add context to this chat...
Attach to chat

(Local) Anaconda Assistant in JupyterLab

Anaconda Assistant, the AI coding assistant included with Anaconda Toolbox, is available in your local (desktop) instance of JupyterLab, too! As the Assistant is virtually identical to its cloud counterpart in Anaconda Notebooks, you can refer to our *Anaconda Assistant quickstart guide* for guidance on using the Assistant.

Installing Anaconda Assistant

You can enable and access the Assistant in a local JupyterLab instance through either the command line interface (CLI) or Navigator, the graphical user interface (GUI) that is automatically installed with Anaconda.

Navigator

Open *Navigator*, install Anaconda Toolbox, and launch JupyterLab using the following instructions:

1. Open Navigator:

   #### Windows/Linux

   Click **Start**, search for "Navigator", and then click to open.

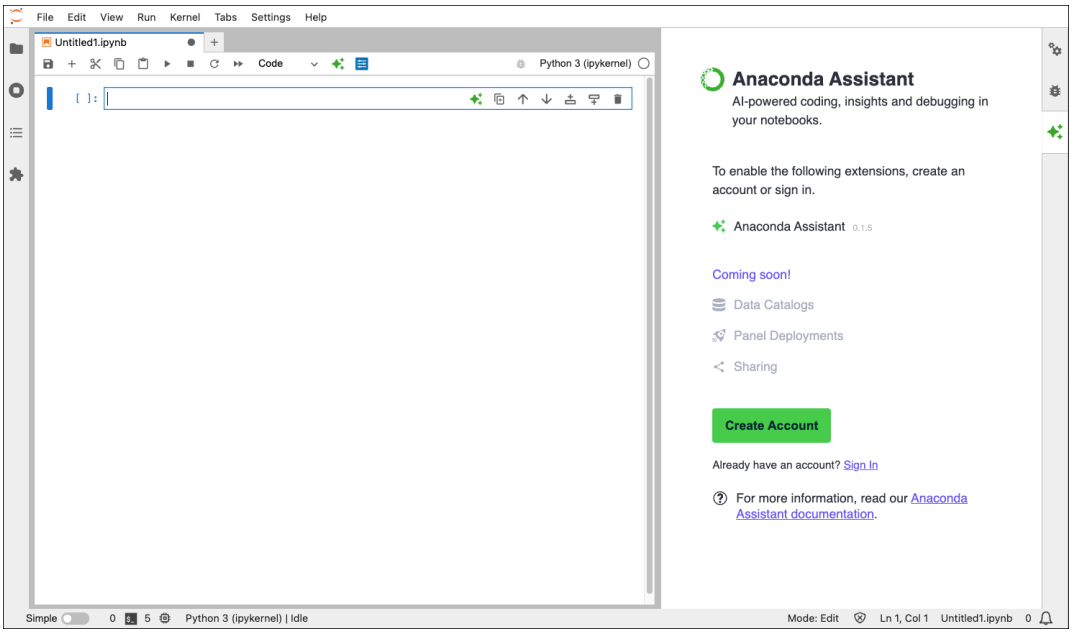
   #### macOS

   Click **Launchpad** and select **Anaconda Navigator**. Alternatively, use Cmd+Spacebar to open Spotlight Search, type "Navigator", and then press Return to open the program.

   Note: If you run into any issues opening Navigator, refer to our *Navigator troubleshooting* topic for assistance.

   ---

2. Locate the **Anaconda Toolbox** tile and click **Install**.
3. Once the installation is complete, click **Launch** on the same tile to launch a new JupyterLab session.
4. Open a new notebook. The Assistant appears to the right of the notebook.



5. Log in or create an account on Anaconda Cloud.

CLI

Install the `anaconda-toolbox` package (which contains the Assistant) and launch JupyterLab using the following instructions:

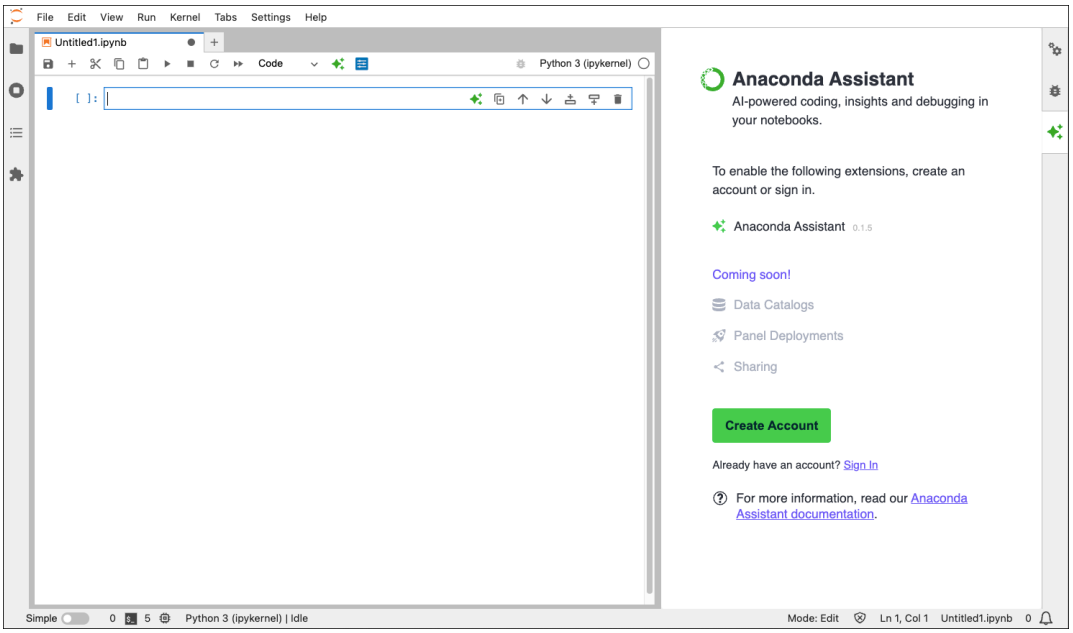
1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Install `anaconda-toolbox` by running the following command:

```
conda install anaconda-toolbox
```

3. Launch JupyterLab by running the following command:

```
jupyter lab
```

4. Open a new notebook. The Assistant appears to the right of the notebook.



5. Log in or create an account on Anaconda Cloud.

You can submit 30 requests to the Assistant for free—after that, you must upgrade your account to interact further with the Assistant.

Refer to our *Anaconda Assistant quickstart guide* for guidance on using the Assistant.

Updating Anaconda Assistant

You can update the Assistant through either the CLI or Navigator, the GUI that is automatically installed with Anaconda.

Navigator

1. Open Navigator:

Windows/Linux

Click **Start**, search for "Navigator", and then click to open.

macOS

Click **Launchpad** and select **Anaconda Navigator**. Alternatively, use Cmd+Spacebar to open Spotlight Search, type "Navigator", and then press Return to open the program.

Note: If you run into any issues opening Navigator, refer to our *Navigator troubleshooting* topic for assistance.

---

2. On the **Anaconda Toolbox** tile, click **Settings**.
3. In the dropdown, select *Update application*. You may need to refresh Navigator to see your changes take effect.

CLI

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Update the `anaconda-toolbox` package (which contains the Assistant) by running the following command:

```
conda update anaconda-toolbox
```

3. Once the update is complete, refresh Navigator to see your changes take effect.

Uninstalling Anaconda Assistant

You can remove the Assistant from your local instance of Jupyterlab through either the CLI or Navigator, the GUI that is automatically installed with Anaconda.

Navigator

1. Open Navigator:

Windows/Linux

Click **Start**, search for "Navigator", and then click to open.

macOS

Click **Launchpad** and select **Anaconda Navigator**. Alternatively, use Cmd+Spacebar to open Spotlight Search, type "Navigator", and then press Return to open the program.

Note: If you run into any issues opening Navigator, refer to our *Navigator troubleshooting* topic for assistance.

---

2. On the **Anaconda Toolbox** tile, click **Settings**.
3. In the dropdown, select *Remove application*. You may need to refresh Navigator to see your changes take effect.

CLI

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Uninstall `anaconda-toolbox` by running the following command:

```
conda remove anaconda-toolbox
```

3. Once the uninstall is complete, refresh Navigator to see your changes take effect.

Note: As JupyterLab is a requirement for the Assistant, it is also removed when uninstalling the Assistant. To reinstall JupyterLab without the Assistant, run the following command:

```
conda install jupyterlab
```

Environments

Anaconda Notebooks is a hosted JupyterLab service that enables you to run JupyterLab notebooks online while simultaneously taking advantage of conda's robust environment management tools. To execute code in a conda environment in Anaconda Notebooks, you must associate each environment with a language-specific kernel.

Environments and kernels

What is an environment?

An environment is a folder or directory that contains a specific collection of conda packages and their dependencies.

Working in separate environments allows you to maintain and run packages without interference from other collections of packages. For example, you may require separate conda environments to maintain distinct versions of Python based on distinct package dependencies.

What is a kernel?

A kernel is a programming-language-specific process that interprets your code, runs it, and gives you the results. In Jupyter Notebooks, kernels allow users to run code in cells and receive immediate output. For example, `ipykernel` enables interactive computing in Python, and `r-irkernel` enables the same for R.

In order for an environment to be able to run code for a notebook, it must contain a kernel package; otherwise, the environment will not be recognized by JupyterLab as an available kernel. For this reason, the default environments available in Anaconda Notebooks already contain the `ipykernel` package.

To add a kernel package to a custom environment, see *creating a custom environment*.

Using default environments

Custom environments often use large amounts of your limited Anaconda Notebooks storage space. Because of this, Anaconda provides a number of *read-only* default environments that contain all the packages from the latest release of Anaconda Distribution.

The default environment naming convention is typically `anaconda-<YEAR>.<MONTH>-py<PYTHON_VERSION>`, which maps to Anaconda Distribution releases:

Environment Name	Status	Description
anaconda-2024.02-py10	Live	Latest Anaconda Packages (stable & recommended)
anaconda-ai-2024.04-py10	Live	Latest Anaconda Packages + AI Packages

Packages included in anaconda-2024.02-py10

Package Name	Package Version
_anaconda_depends	2024.02
_libgcc_mutex	0.1
_openmp_mutex	5.1
abseil-cpp	20211102
aiobotocore	2.7.0
aiohttp	3.9.3
aioitertools	0.7.1
aiosignal	1.2.0
alabaster	0.7.12
altair	5.0.1
anaconda-catalogs	0.2.0
anyio	4.2.0
aom	3.6.0
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	14.0.2
astroid	2.14.2
astropy	5.3.4
asttokens	2.0.5
async-lru	2.0.4
async-timeout	4.0.3
atomicwrites	1.4.0
attrs	23.1.0
automat	20.2.0
autopep8	2.0.4
aws-c-auth	0.6.19
aws-c-cal	0.5.20
aws-c-common	0.8.5
aws-c-compression	0.2.16
aws-c-event-stream	0.2.15
aws-c-http	0.6.25
aws-c-io	0.13.10
aws-c-mqtt	0.7.13
aws-c-s3	0.1.51
aws-c-sdkutils	0.1.6
aws-checksums	0.1.13
aws-crt-cpp	0.18.16
aws-sdk-cpp	1.10.55
babel	2.11.0
bcrypt	3.2.0
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	24.3.0
blas	1
bleach	4.1.0
blinker	1.6.2
blosc	1.21.3

continues on next page

Table 285 – continued from previous page

Package Name	Package Version
bokeh	3.4.0
boost-cpp	1.82.0
botocore	1.31.64
bottleneck	1.3.7
brotli	1.0.9
brotli-bin	1.0.9
brotli-python	1.0.9
brunsli	0.1
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.12.0
ca-certificates	2024.3.11
cachetools	4.2.2
certifi	2024.2.2
cffi	1.16.0
cfgv	3.4.0
cfitsio	3.47
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
click	8.1.7
cloudpickle	2.2.1
colorama	0.4.6
colorcet	3.1.0
comm	0.2.1
constantly	23.10.4
contourpy	1.2.0
cookiecutter	2.6.0
cryptography	42.0.5
cssselect	1.2.0
curl	8.5.0
cycler	0.11.0
cyrus-sasl	2.1.28
cytoolz	0.12.2
dask	2023.11.0
dask-core	2023.11.0
datashader	0.16.0
dav1d	1.2.1
dbus	1.13.18
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
diff-match-patch	20200713
dill	0.3.7
distlib	0.3.6
distributed	2023.11.0
docstring-to-markdown	0.11
docutils	0.18.1
entrypoints	0.4
et_xmlfile	1.1.0

continues on next page

Table 285 – continued from previous page

Package Name	Package Version
exceptiongroup	1.2.0
executing	0.8.3
expat	2.5.0
filelock	3.13.1
flake8	6.0.0
flask	2.2.5
fontconfig	2.14.1
fonttools	4.25.0
freetype	2.12.1
frozenlist	1.4.0
fsspec	2023.10.0
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
gitdb	4.0.7
gitpython	3.1.37
glib	2.78.4
glib-tools	2.78.4
glog	0.5.0
gmp	6.2.1
gmpy2	2.1.2
greenlet	3.0.1
grpc-cpp	1.48.2
gst-plugins-base	1.14.1
gstreamer	1.14.1
h5py	3.9.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.18.3
hvplot	0.9.2
hyperlink	21.0.0
icu	73.1
identify	2.5.5
idna	3.4
imagecodecs	2023.1.23
imageio	2.33.1
imagesize	1.4.1
imbalanced-learn	0.11.0
importlib-metadata	7.0.1
importlib_metadata	7.0.1
incremental	22.10.0
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.28.0
ipython	8.20.0
ipython_genutils	0.2.0
ipywidgets	8.1.2

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Package Name	Package Version
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.1.0
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jeepney	0.7.1
jellyfish	1.0.1
jinja2	3.1.3
jmespath	1.0.1
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonschema	4.19.2
jsonschema-specifications	2023.7.1
jupyter	1.0.0
jupyter-lsp	2.2.0
jupyter_client	8.6.0
jupyter_console	6.6.3
jupyter_core	5.5.0
jupyter_events	0.8.0
jupyter_server	2.10.0
jupyter_server_terminals	0.4.4
jupyterlab	4.0.11
jupyterlab-variableinspect	or 3.1.0
jupyterlab_pygments	0.1.2
jupyterlab_server	2.25.1
jupyterlab_widgets	3.0.10
jxrlib	1.1
keyring	24.3.1
kiwisolver	1.4.4
krb5	1.20.1
lazy-object-proxy	1.6.0
lazy_loader	0.3
lcms2	2.12
ld_impl_linux-64	2.38
lerc	3
libaec	1.0.4
libavif	0.11.1
libboost	1.82.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcups	2.4.2
libcurl	8.5.0
libdeflate	1.17
libedit	3.1.20230828

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Package Name	Package Version
libev	4.33
libevent	2.1.12
libffi	3.4.4
libgcc-ng	11.2.0
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.78.4
libgomp	11.2.0
libiconv	1.16
libllvm14	14.0.6
libnghttp2	1.57.0
libpng	1.6.39
libpq	12.17
libprotobuf	3.20.3
libsodium	1.0.18
libspatialindex	1.9.3
libssh2	1.10.0
libstdcxx-ng	11.2.0
libthrift	0.15.0
libtiff	4.5.1
libuuid	1.41.5
libwebp-base	1.3.2
libxcb	1.15
libxkbcommon	1.0.1
libxml2	2.10.4
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llvmlite	0.42.0
locket	1.0.0
lxml	4.9.3
lz4	4.3.2
lz4-c	1.9.4
lzo	2.1
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.3
matplotlib	3.8.0
matplotlib-base	3.8.0
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
mistune	2.0.4
mkl	2023.1.0
mkl-service	2.4.0
mkl_fft	1.3.8
mkl_random	1.2.4
more-itertools	10.1.0
mpc	1.1.0

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Package Name	Package Version
mpfr	4.0.2
mpmath	1.3.0
msgpack-python	1.0.3
multidict	6.0.4
multipledispatch	0.6.0
munkres	1.1.4
mypy	1.8.0
mypy_extensions	1.0.0
mysql	5.7.24
nbclient	0.8.0
nbconvert	7.10.0
nbformat	5.9.2
ncurses	6.4
nest-asyncio	1.6.0
networkx	3.1
nltk	3.8.1
nodeenv	1.7.0
notebook	7.0.8
notebook-shim	0.2.3
nspr	4.35
nss	3.89.1
numba	0.59.1
numexpr	2.8.7
numpy	1.26.4
numpy-base	1.26.4
numpydoc	1.5.0
oniguruma	6.9.7.1
openjpeg	2.4.0
openpyxl	3.0.10
openssl	3.0.13
orc	1.7.4
overrides	7.4.0
packaging	23.2
pandas	2.1.4
pandocfilters	1.5.0
panel	1.4.1
param	2.1.0
parsel	1.8.1
parso	0.8.3
partd	1.4.1
pathspec	0.10.3
patsy	0.5.3
pcre2	10.42
pexpect	4.8.0
pickleshare	0.7.5
pillow	10.2.0
pip	23.3.1
platformdirs	2.5.2
plotly	5.19.0
pluggy	1.0.0

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Package Name	Package Version
ply	3.11
pre-commit	3.4.0
prometheus_client	0.14.1
prompt-toolkit	3.0.43
prompt_toolkit	3.0.43
protego	0.1.16
protobuf	3.20.3
psutil	5.9.0
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	9.0.0
pyarrow	14.0.2
pyasn1	0.4.8
pyasn1-modules	0.2.8
pycodestyle	2.10.0
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydeck	0.7.1
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pylint	2.16.2
pylint-venv	3.0.3
pyls-spyder	0.4.0
pympler	0.9
pyodbc	5.0.1
pyopenssl	24.0.0
pyparsing	3.0.9
pyqt	5.15.10
pyqt5-sip	12.13.0
pyqtwebengine	5.15.10
pysocks	1.7.1
pytables	3.9.2
pytest	7.4.0
python	3.10.14
python-dateutil	2.8.2
python-fastjsonschema	2.16.2
python-json-logger	2.0.7
python-lmdb	1.4.1
python-lsp-black	2.0.0
python-lsp-jsonrpc	1.1.2
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
python-tzdata	2023.3
pytoolconfig	1.2.6
pytz	2023.3.post1

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Package Name	Package Version
pyviz_comms	3.0.2
pywavelets	1.5.0
pyxdg	0.27
pyyaml	6.0.1
pyzmq	25.1.2
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.4.1
queuelib	1.6.2
re2	2022.04.01
readline	8.2
referencing	0.30.2
regex	2023.10.3
requests	2.31.0
requests-file	1.5.1
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.3.5
rope	1.12.0
rpds-py	0.10.6
rtree	1.0.1
s2n	1.3.27
s3fs	2023.10.0
scikit-image	0.22.0
scikit-learn	1.3.0
scipy	1.12.0
scrapy	2.11.1
seaborn	0.12.2
secretstorage	3.3.1
semver	3.0.2
send2trash	1.8.2
service_identity	18.1.0
setuptools	68.2.2
sip	6.7.12
six	1.16.0
smart_open	5.2.1
smmap	4.0.0
snappy	1.1.10
sniffio	1.3.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.5
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0

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Package Name	Package Version
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializingh	tml 1.1.5
spyder	5.4.3
spyder-kernels	2.4.4
sqlalchemy	2.0.25
sqlite	3.41.2
stack_data	0.2.0
statsmodels	0.14.0
streamlit	1.16.0
sympy	1.12
tabulate	0.9.0
tbb	2021.8.0
tblib	1.7.0
tenacity	8.2.2
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
threadpoolctl	2.2.0
three-merge	0.1.1
tiffile	2023.4.12
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.3.3
tqdm	4.65.0
traitlets	5.7.1
twisted	23.10.0
typing-extensions	4.9.0
typing_extensions	4.9.0
tzdata	2024a
tzlocal	2.1
uc-micro-py	1.0.1
ujson	5.4.0
ukkonen	1.0.1
unidecode	1.2.0
unixodbc	2.3.11
urllib3	2.0.7
utf8proc	2.6.1
validators	0.18.2
virtualenv	20.17.1
w3lib	2.1.2
watchdog	2.1.6
wcwidth	0.2.5
webencodings	0.5.1
websocket-client	0.58.0

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Package Name	Package Version
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.41.2
widgetsnbextension	4.0.10
wrapt	1.14.1
wurlitzer	3.0.2
xarray	2023.6.0
xyzservices	2022.9.0
xz	5.4.6
yaml	0.2.5
yapf	0.31.0
yarl	1.9.3
zeromq	4.3.5
zfp	1.0.0
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1
zope.interface	5.4.0
zstd	1.5.5

Packages included in anaconda-ai-2024.04-py10

Package Name	Package Version
_anaconda_depends	2024.02
_libgcc_mutex	0.1
_openmp_mutex	5.1
_py-xgboost-mutex	2
_tflow_select	2.3.0
abseil-cpp	20211102
absl-py	1.4.0
aiobotocore	2.7.0
aiohttp	3.9.3
aioitertools	0.7.1
aiosignal	1.2.0
alabaster	0.7.12
altair	5.0.1
anaconda-catalogs	0.2.0
annotated-types	0.6.0
anyio	4.2.0
aom	3.6.0
appdirs	1.4.4
argon2-cffi	21.3.0
argon2-cffi-bindings	21.2.0
arrow	1.2.3
arrow-cpp	11.0.0
astroid	2.14.2

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Package Name	Package Version
astropy	5.3.4
asttokens	2.0.5
astunparse	1.6.3
async-lru	2.0.4
async-timeout	4.0.3
atomicwrites	1.4.0
attrs	23.1.0
automat	20.2.0
autopep8	2.0.4
aws-c-common	0.4.57
aws-c-event-stream	0.1.6
aws-checksums	0.1.9
aws-sdk-cpp	1.8.185
babel	2.11.0
backoff	2.2.1
bcrypt	4.1.2
beautifulsoup4	4.12.2
binaryornot	0.4.4
black	24.3.0
blas	1
bleach	4.1.0
blinker	1.6.2
blosc	1.21.3
bokeh	3.4.0
boost-cpp	1.73.0
botocore	1.31.64
bottleneck	1.3.7
brotli	1.0.9
brotli-bin	1.0.9
brotli-python	1.0.9
brunsli	0.1
bzip2	1.0.8
c-ares	1.19.1
c-blosc2	2.12.0
ca-certificates	2024.3.11
cachetools	4.2.2
cairo	1.16.0
catalogue	2.0.10
certifi	2024.2.2
cffi	1.16.0
cfgv	3.4.0
cfitsio	3.47
chardet	4.0.0
charls	2.2.0
charset-normalizer	2.0.4
chroma-hnswlib	0.7.3
chromadb	0.4.17
click	8.1.7
cloudpathlib	0.16.0
cloudpickle	2.2.1

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Package Name	Package Version
colorama	0.4.6
colorcet	3.1.0
coloredlogs	15.0.1
comm	0.2.1
confection	0.1.4
constantly	23.10.4
contourpy	1.2.0
cookiecutter	2.6.0
cryptography	41.0.3
cssselect	1.2.0
ctransformers	0.2.27
curl	8.2.1
cycler	0.11.0
cymem	2.0.6
cyrus-sasl	2.1.28
cython-blis	0.7.9
cytoolz	0.12.2
dask	2023.11.0
dask-core	2023.11.0
dataclasses-json	0.6.4
datasets	2.12.0
datashader	0.16.0
dav1d	1.2.1
dbus	1.13.18
debugpy	1.6.7
decorator	5.1.1
defusedxml	0.7.1
deprecated	1.2.14
diff-match-patch	20200713
dill	0.3.6
dirtyjson	1.0.8
distlib	0.3.6
distributed	2023.11.0
distro	1.9.0
docstring-to-markdown	0.11
docutils	0.18.1
eigen	3.4.0
entrypoints	0.4
et_xmlfile	1.1.0
exceptiongroup	1.2.0
executing	0.8.3
expat	2.5.0
fastapi	0.110.1
ffmpeg	4.2.2
filelock	3.13.1
flake8	6.0.0
flask	2.2.5
flatbuffers	2.0.0
fontconfig	2.14.1
fonttools	4.25.0

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Package Name	Package Version
freetype	2.12.1
frozenlist	1.4.0
fsspec	2023.10.0
gast	0.4.0
gensim	4.3.0
gflags	2.2.2
giflib	5.2.1
gitdb	4.0.7
gitpython	3.1.37
glib	2.78.4
glib-tools	2.78.4
glog	0.5.0
gmp	6.2.1
gmpy2	2.1.2
gnutls	3.6.15
google-auth	2.6.0
google-auth-oauthlib	0.4.4
google-pasta	0.2.0
googleapis-common-protos	1.63.0
graphite2	1.3.14
greenlet	3.0.1
grpc-cpp	1.46.1
grpcio	1.62.1
gst-plugins-base	1.14.1
gstreamer	1.14.1
h11	0.14.0
h5py	3.9.0
harfbuzz	4.3.0
hdf5	1.12.1
heapdict	1.0.1
holoviews	1.18.3
httpcore	1.0.2
httptools	0.6.1
httpx	0.26.0
huggingface_accelerate	0.21.0
huggingface_hub	0.20.3
humanfriendly	10
hvplot	0.9.2
hyperlink	21.0.0
icu	58.2
identify	2.5.5
idna	3.4
imagecodecs	2023.1.23
imageio	2.33.1
imagesize	1.4.1
imbalanced-learn	0.11.0
importlib-metadata	7.0.1
importlib-resources	6.4.0
importlib_metadata	7.0.1
incremental	22.10.0

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Package Name	Package Version
inflection	0.5.1
iniconfig	1.1.1
intake	0.6.8
intel-openmp	2023.1.0
intervaltree	3.1.0
ipykernel	6.28.0
ipython	8.20.0
ipython_genutils	0.2.0
ipywidgets	8.1.2
isort	5.9.3
itemadapter	0.3.0
itemloaders	1.1.0
itsdangerous	2.0.1
jaraco.classes	3.2.1
jedi	0.18.1
jeepney	0.7.1
jellyfish	1.0.1
jinja2	3.1.3
jmespath	1.0.1
joblib	1.2.0
jpeg	9e
jq	1.6
json5	0.9.6
jsonpatch	1.33
jsonpointer	2.4
jsonschema	4.19.2
jsonschema-specifications	2023.7.1
jupyter	1.0.0
jupyter-lsp	2.2.0
jupyter_client	8.6.0
jupyter_console	6.6.3
jupyter_core	5.5.0
jupyter_events	0.8.0
jupyter_server	2.10.0
jupyter_server_terminals	0.4.4
jupyterlab	4.0.11
jupyterlab-variableinspect	or 3.1.0
jupyterlab_pygments	0.1.2
jupyterlab_server	2.25.1
jupyterlab_widgets	3.0.10
jxrlib	1.1
keras	2.11.0
keras-preprocessing	1.1.2
keyring	24.3.1
kiwisolver	1.4.4
krb5	1.20.1
kubernetes	29.0.0
lame	3.1
langchain	0.1.16
langchain-community	0.0.32

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Package Name	Package Version
langchain-core	0.1.42
langchain-text-splitters	0.0.1
langcodes	3.3.0
langsmith	0.1.45
lazy-object-proxy	1.6.0
lazy_loader	0.3
lcms2	2.12
ld_impl_linux-64	2.38
lerc	3
libaec	1.0.4
libavif	0.11.1
libboost	1.73.0
libbrotlicommon	1.0.9
libbrotlidec	1.0.9
libbrotlienc	1.0.9
libclang	14.0.6
libclang13	14.0.6
libcups	2.4.2
libcurl	8.2.1
libdeflate	1.17
libedit	3.1.20230828
libev	4.33
libevent	2.1.12
libffi	3.4.4
libgcc-ng	11.2.0
libgfortran-ng	11.2.0
libgfortran5	11.2.0
libglib	2.78.4
libgomp	11.2.0
libiconv	1.16
libidn2	2.3.4
libllvm14	14.0.6
libnghttp2	1.52.0
libopenblas	0.3.21
libopus	1.3.1
libpng	1.6.39
libpq	12.15
libprotobuf	3.20.3
libsodium	1.0.18
libspatialindex	1.9.3
libssh2	1.10.0
libstdcxx-ng	11.2.0
libtasn1	4.19.0
libthrift	0.15.0
libtiff	4.5.1
libunistring	0.9.10
libuuid	1.41.5
libvpx	1.7.0
libwebp	1.3.2
libwebp-base	1.3.2

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Package Name	Package Version
libxcb	1.15
libxgboost	1.7.6
libxkbcommon	1.0.1
libxml2	2.10.4
libxslt	1.1.37
libzopfli	1.0.3
linkify-it-py	2.0.0
llama-index	0.9.48
llvmlite	0.42.0
locket	1.0.0
lxml	4.9.3
lz4	4.3.2
lz4-c	1.9.4
lzo	2.1
markdown	3.4.1
markdown-it-py	2.2.0
markupsafe	2.1.3
marshmallow	3.21.1
matplotlib	3.8.0
matplotlib-base	3.8.0
matplotlib-inline	0.1.6
mccabe	0.7.0
mdit-py-plugins	0.3.0
mdurl	0.1.0
mistune	2.0.4
mkl	2023.1.0
monotonic	1.6
more-itertools	10.1.0
mpc	1.1.0
mpfr	4.0.2
mpmath	1.3.0
msgpack-python	1.0.3
multidict	6.0.4
multipledispatch	0.6.0
multiprocess	0.70.14
munkres	1.1.4
murmurhash	1.0.7
mypy	1.8.0
mypy_extensions	1.0.0
mysql	5.7.24
nbclient	0.8.0
nbconvert	7.10.0
nbformat	5.9.2
ncurses	6.4
nest-asyncio	1.6.0
nettle	3.7.3
networkx	3.1
ninja	1.10.2
ninja-base	1.10.2
nltk	3.8.1

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Package Name	Package Version
nodeenv	1.7.0
notebook	7.0.8
notebook-shim	0.2.3
nspr	4.35
nss	3.89.1
numba	0.59.1
numexpr	2.8.7
numpy	1.26.4
numpy-base	1.26.4
numpydoc	1.5.0
oauthlib	3.2.2
oniguruma	6.9.7.1
onnxruntime	1.17.1
openai	1.17.0
opencv	4.6.0
openh264	2.1.1
openjpeg	2.4.0
openpyxl	3.0.10
openssl	1.1.1w
opentelemetry-api	1.16.0
opentelemetry-exporter-otl	p-proto-grpc
opentelemetry-proto	1.16.0
opentelemetry-sdk	1.16.0
opentelemetry-semantic-con	ventions 0.37
opt_einsum	3.3.0
orc	1.7.4
orjson	3.10.0
overrides	7.4.0
packaging	23.2
pandas	2.1.4
pandocfilters	1.5.0
panel	1.4.1
param	2.1.0
parsel	1.8.1
parso	0.8.3
partd	1.4.1
pathspec	0.10.3
patsy	0.5.3
pcre2	10.42
pexpect	4.8.0
pickleshare	0.7.5
pillow	10.2.0
pip	23.3.1
pixman	0.40.0
platformdirs	2.5.2
plotly	5.19.0
pluggy	1.0.0
ply	3.11
posthog	3.5.0
pre-commit	3.4.0

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Package Name	Package Version
preshed	3.0.6
prometheus_client	0.14.1
prompt-toolkit	3.0.43
prompt_toolkit	3.0.43
protego	0.1.16
protobuf	3.19.6
psutil	5.9.0
ptyprocess	0.7.0
pulsar-client	3.4.0
pure_eval	0.2.2
py-cpuinfo	9.0.0
py-xgboost	1.7.6
pyarrow	11.0.0
pyasn1	0.4.8
pyasn1-modules	0.2.8
pycodestyle	2.10.0
pycparser	2.21
pyct	0.5.0
pycurl	7.45.2
pydantic	2.5.3
pydantic-core	2.14.6
pydeck	0.7.1
pydispatcher	2.0.5
pydocstyle	6.3.0
pyerfa	2.0.0
pyflakes	3.0.1
pygments	2.15.1
pyjwt	2.4.0
pylint	2.16.2
pylint-venv	3.0.3
pyls-spyder	0.4.0
pympler	0.9
pyodbc	5.0.1
pyopenssl	23.2.0
pyparsing	3.0.9
pypdf	4.2.0
pypika	0.48.9
pyqt	5.15.10
pyqt5-sip	12.13.0
pyqtwebengine	5.15.10
pysocks	1.7.1
pytables	3.9.2
pytest	7.4.0
python	3.10.13
python-dateutil	2.8.2
python-dotenv	1.0.1
python-fastjsonschema	2.16.2
python-flatbuffers	2
python-json-logger	2.0.7
python-lmdb	1.4.1

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Table 286 – continued from previous page

Package Name	Package Version
python-lsp-black	2.0.0
python-lsp-jsonrpc	1.1.2
python-lsp-server	1.7.2
python-slugify	5.0.2
python-snappy	0.6.1
python-tzdata	2023.3
python-xxhash	2.0.2
pytoolconfig	1.2.6
pytorch	2.2.0
pytz	2023.3.post1
pyviz_comms	3.0.2
pywavelets	1.5.0
pyxdg	0.27
pyyaml	6.0.1
pyzmq	25.1.2
qdarkstyle	3.0.2
qstylizer	0.2.2
qt-main	5.15.2
qt-webengine	5.15.9
qtawesome	1.2.2
qtconsole	5.4.2
qtpy	2.4.1
qtwebkit	5.212
queuelib	1.6.2
re2	2022.04.01
readline	8.2
referencing	0.30.2
regex	2023.10.3
requests	2.31.0
requests-file	1.5.1
requests-oauthlib	1.3.0
responses	0.13.3
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.3.5
rope	1.12.0
rpds-py	0.10.6
rsa	4.7.2
rtree	1.0.1
s3fs	2023.10.0
safetensors	0.4.2
scikit-image	0.22.0
scikit-learn	1.3.0
scipy	1.12.0
scrapy	2.11.1
seaborn	0.12.2
secretstorage	3.3.1
semver	3.0.2
send2trash	1.8.2
service_identity	18.1.0

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Table 286 – continued from previous page

Package Name	Package Version
setuptools	68.2.2
shellingham	1.5.0
sip	6.7.12
six	1.16.0
smart_open	5.2.1
smmap	4.0.0
snappy	1.1.10
sniffio	1.3.0
snowballstemmer	2.2.0
sortedcontainers	2.4.0
soupsieve	2.5
spacy	3.7.2
spacy-legacy	3.0.12
spacy-loggers	1.0.4
sphinx	5.0.2
sphinxcontrib-applehelp	1.0.2
sphinxcontrib-devhelp	1.0.2
sphinxcontrib-htmlhelp	2.0.0
sphinxcontrib-jsmath	1.0.1
sphinxcontrib-qthelp	1.0.3
sphinxcontrib-serializingh	tml 1.1.5
spyder	5.4.3
spyder-kernels	2.4.4
sqlalchemy	2.0.29
sqlite	3.41.2
srsly	2.4.8
stack_data	0.2.0
starlette	0.37.2
statsmodels	0.14.0
streamlit	1.16.0
sympy	1.12
tabulate	0.9.0
tbb	2021.8.0
tblib	1.7.0
tenacity	8.2.3
tensorboard	2.11.0
tensorboard-data-server	0.6.1
tensorboard-plugin-wit	1.8.1
tensorflow	2.11.0
tensorflow-base	2.11.0
tensorflow-estimator	2.11.0
termcolor	2.1.0
terminado	0.17.1
text-unidecode	1.3
textdistance	4.2.1
thinc	8.2.2
threadpoolctl	2.2.0
three-merge	0.1.1
tifffile	2023.4.12
tiktoken	0.6.0

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Table 286 – continued from previous page

Package Name	Package Version
tinycss2	1.2.1
tk	8.6.12
tldextract	3.2.0
tokenizers	0.13.2
toml	0.10.2
tomli	2.0.1
tomlkit	0.11.1
toolz	0.12.0
tornado	6.3.3
tqdm	4.65.0
traitlets	5.7.1
transformers	4.32.1
twisted	23.10.0
typer	0.9.0
typing-extensions	4.9.0
typing-inspect	0.9.0
typing_extensions	4.9.0
tzdata	2024a
tzlocal	2.1
uc-micro-py	1.0.1
ujson	5.4.0
ukkonen	1.0.1
unidecode	1.2.0
unixodbc	2.3.11
urllib3	2.0.7
utf8proc	2.6.1
uvicorn	0.29.0
uvloop	0.19.0
validators	0.18.2
virtualenv	20.17.1
w3lib	2.1.2
wasabi	0.9.1
watchdog	2.1.6
watchfiles	0.21.0
wcwidth	0.2.5
weasel	0.3.4
webencodings	0.5.1
websocket-client	0.58.0
websockets	12
werkzeug	2.2.3
whatthepatch	1.0.2
wheel	0.41.2
widgetsnbextension	4.0.10
wrapt	1.14.1
wurlitzer	3.0.2
x264	1!157.2019121
xarray	2023.6.0
xxhash	0.8.0
xyzservices	2022.9.0
xz	5.4.6

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Table 286 – continued from previous page

Package Name	Package Version
yaml	0.2.5
yapf	0.31.0
yarl	1.9.3
zeromq	4.3.5
zfp	1.0.0
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zope	1
zope.interface	5.4.0
zstd	1.5.5

To see a list of available environments:

```
conda info --envs
```

To see a list of packages in your current environment:

```
conda list
```

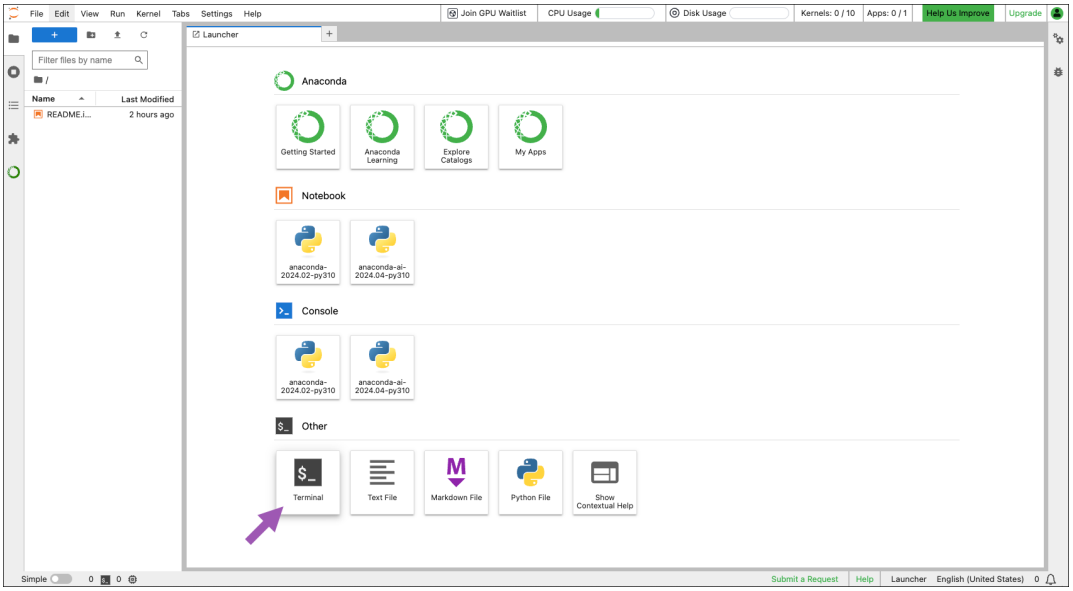
Creating custom environments

If you need a specific set of packages that are not included in one of our default environments, you can create your own environment to customize to your needs.

Note: Custom environments are stored using your dedicated, persistent Anaconda Notebooks storage. This ensures the custom environment will be available after the current session. Custom environments use your personal storage space and can easily get quite large, so *only include the packages you need.*

To create a new environment with an associated kernel:

1. Open a terminal from the Launcher, which you can access by clicking the blue plus **+** in the top-left corner.



2. Create a conda environment with an associated kernel by running the following command:

```
# Replace <ENV_NAME> with a new name for your environment
# Replace <PACKAGE> with the name of a package you want to install in your␣
↪environment
# Replace <KERNEL_PACKAGE> with the appropriate kernel package
conda create --name <ENV_NAME> <PACKAGE> <KERNEL_PACKAGE>
```

Note:

- To create a Python kernel, replace <KERNEL_PACKAGE> with `ipykernel`.
- To create an R kernel, replace <KERNEL_PACKAGE> with `r-irkernel`.

For more information about creating conda environments, see the official conda docs.

It might take a minute for your environment to be created and available for use. You might need to close and reopen your active notebook or refresh the browser for your new environment to appear.

Activating environments

There are a few locations from which you can activate your environment:

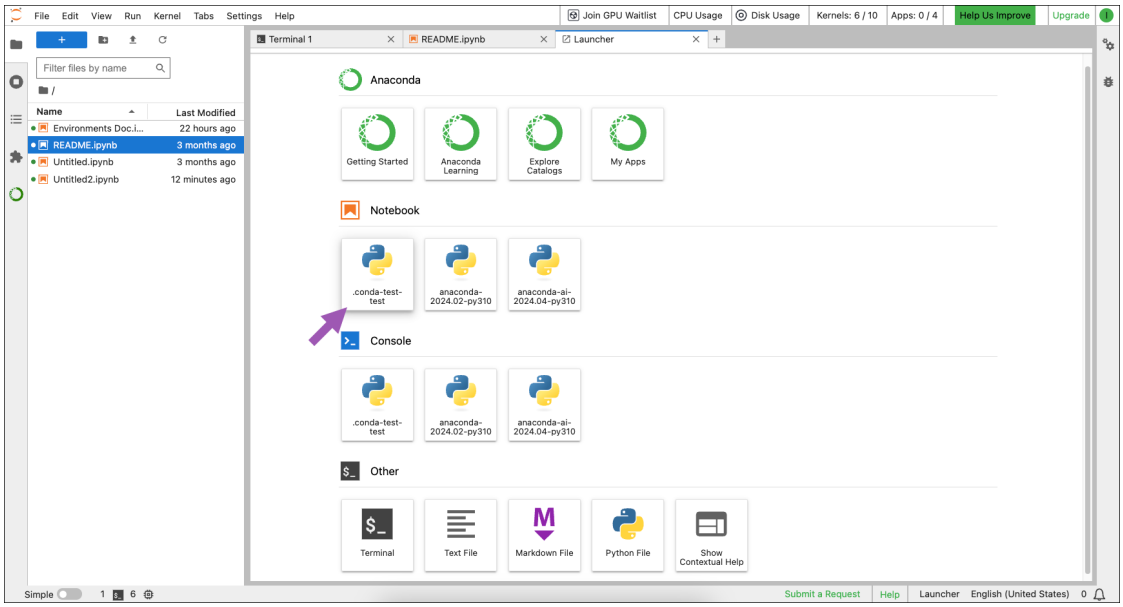
Terminal

Run the following within Anaconda Notebooks:

```
# Replace <ENV_NAME> with the name of your environment
conda activate <ENV_NAME>
```

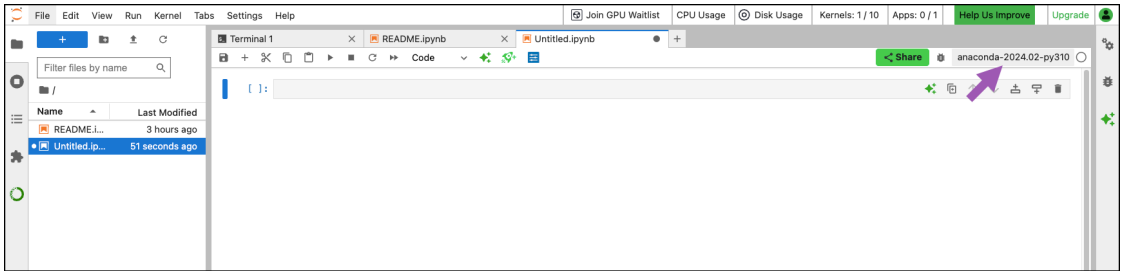
Launcher

Select the notebook displaying your custom environment name.



Notebook

Click the kernel in the top right, then switch to your desired environment in the **Select Kernel** modal.



Installing additional packages

Even after you've created an environment, you can continue to add packages as needed. To install additional packages in your environment, run the following command:

```
# Replace <PACKAGE> with the name of a package you want to install
conda install <PACKAGE>
```

Deactivating environments

It is best practice to deactivate your environment when you are finished working in it. To deactivate your active environment, run the following command:

```
conda deactivate
```

GPU Kernels

In addition to Anaconda Notebook's *default environments*, Anaconda provides access to remote GPU kernels powered by NVIDIA's A10 GPUs. These kernels are ideal for complex, compute-intensive workloads that would otherwise be too time consuming to run in a default environment. You can choose to run the entire notebook on GPU or apply GPU acceleration to specific cells.

What is a GPU kernel?

Anaconda's GPU kernel runs a GPU-enabled environment called "anaconda-01 - nvidia-a10". This environment contains the libraries, drivers, and configurations necessary for communicating with NVIDIA GPUs, as well as the `ipykernel` package to enable interactive computing in Python. See below for a *list of all packages* included in the default environment.

When you assign a GPU kernel to a notebook (or notebook cell), you're using the default GPU-enabled environment. For more information about kernels and environment, see *Environments*.

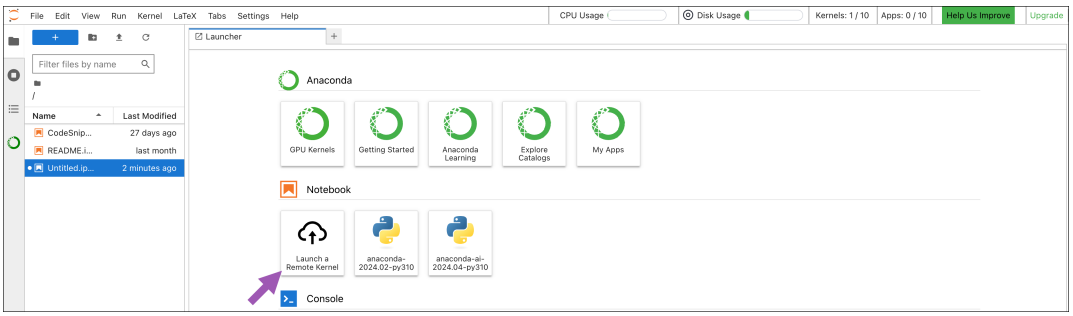
Note: At this time, Anaconda is offering free *credits* to select paid subscribers only. Free tier subscribers who would like to use GPU kernels can upgrade to gain access.

Assigning GPU kernels

There are a few methods you can use to assign a GPU kernel to either an entire notebook or an individual cell:

Launcher

1. Open the Launcher.
2. Under **Notebook**, click **Launch a Remote Kernel**.

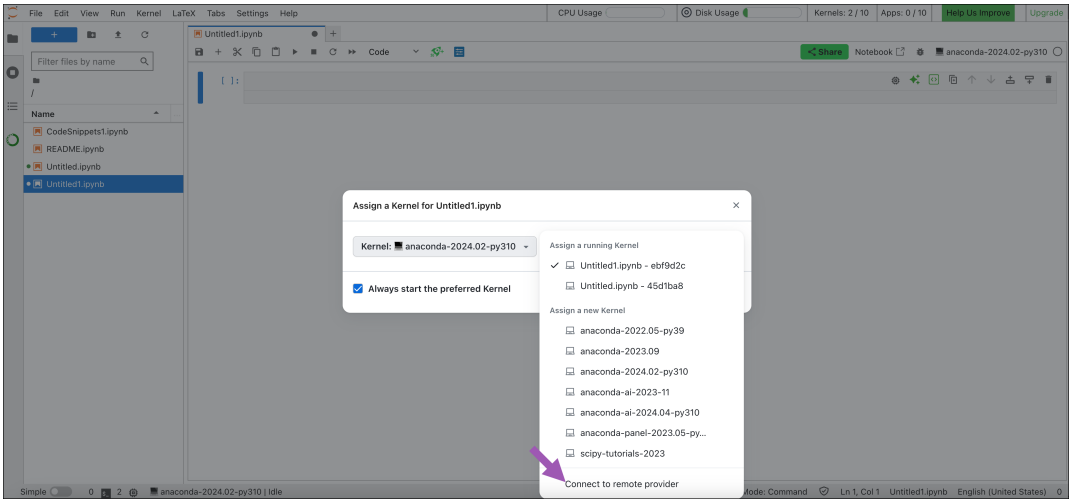


3. In the Launch a Kernel dialog, open the **Environment** dropdown and select a kernel.
4. Use the slider or type a number in the text box to reserve time for the kernel session (in minutes).

5. Assign a name for your kernel or use the default kernel name.
6. Click **Launch a Kernel**.

Notebook

1. In an active notebook, click the kernel in the top right.
2. If you haven't launched a remote kernel yet, select *Connect to remote provider* and follow the steps in the Launcher tab. Otherwise, select the remote kernel (the default kernel name is "nvidia-a10").



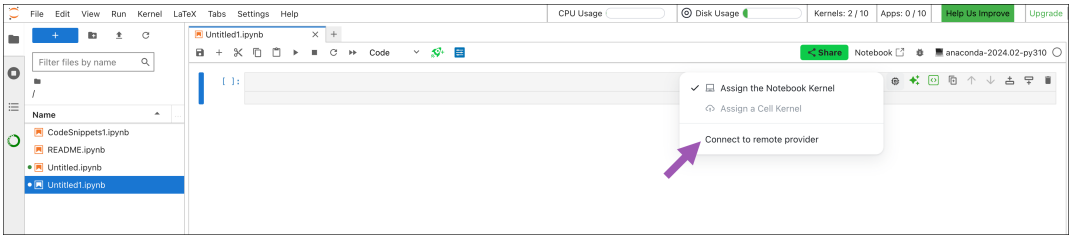
3. In the Assign a Kernel dialog, make sure the remote kernel is selected in the dropdown.
4. Use the slider or type a number in the text box to reserve time for the kernel session (in minutes).

> **Warning:** Don't switch the Transfer variables toggle to **On**. Switching the toggle to **On** causes Notebooks to crash. This is a known issue that is currently being addressed.

5. Click **Assign**.

Cell

1. In an active cell, click **Assign a specific kernel to the cell**.
2. If you haven't launched a remote kernel yet, select *Connect to remote provider* and follow the steps in the Launcher tab. Otherwise, continue to the next step.



3. Click **Assign a Cell Kernel**.
4. Select the Environment and Kernel name.

5. Click **Assign from the Environment**.

A green bar appears beneath the cell, which indicates that the cell has successfully connected to the GPU kernel.

Using GPU kernels

Once you assign a GPU kernel to a notebook or cell, you can run your code as you normally would. You should notice a considerable increase in processing speed, especially for more complex tasks.

Anaconda's default GPU kernel, "anaconda-01 - nvidia-a10", is tied to a read-only GPU-enabled environment that includes the latest Anaconda, AI, and NVIDIA packages.

Packages included in anaconda-01 - nvidia-a10

Package Name	Package Version
_libgcc_mutex	0.1
_openmp_mutex	4.5
accelerate	0.34.2
aiohappyeyeballs	2.4.0
aiohttp	3.10.5
aiosignal	1.3.1
alembic	1.13.1
altair	5.3.0
annotated-types	0.7.0
anyio	4.3.0
aom	3.8.2
archspec	0.2.3
argon2-cffi	23.1.0
argon2-cffi-bindings	21.2.0
arrow	1.3.0
asttokens	2.4.1
async-lru	2.0.4
async_generator	1.1
attrs	23.2.0
aws-c-auth	0.7.17
aws-c-cal	0.6.11
aws-c-common	0.9.15
aws-c-compression	0.2.18
aws-c-event-stream	0.4.2
aws-c-http	0.8.1
aws-c-io	0.14.7
aws-c-mqtt	0.10.3
aws-c-s3	0.5.7
aws-c-sdkutils	0.1.15
aws-checksums	0.1.18
aws-crt-cpp	0.26.6
aws-sdk-cpp	1.11.267
babel	2.14.0
beautifulsoup4	4.12.3
blas	2.122
blas-devel	3.9.0

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Package Name	Package Version
bleach	6.1.0
blinker	1.7.0
blis	0.7.11
blosc	1.21.5
bokeh	3.4.1
boltons	24.0.0
bottleneck	1.3.8
brotli	1.1.0
brotli-bin	1.1.0
brotli-python	1.1.0
brunsli	0.1
bzip2	1.0.8
c-ares	1.28.1
c-blosc2	2.14.4
ca-certificates	2024.8.30
cached-property	1.5.2
cached_property	1.5.2
catalogue	2.0.10
certifi	2024.8.30
certipy	0.1.3
cffi	1.16.0
charls	2.4.2
charset-normalizer	3.3.2
click	8.1.7
cloudpathlib	0.19.0
cloudpickle	3.0.0
colorama	0.4.6
comm	0.2.2
conda	24.3.0
conda-libmamba-solver	24.1.0
conda-package-handling	2.2.0
conda-package-streaming	0.9.0
confection	0.1.5
configurable-http-proxy	4.6.1
contourpy	1.2.1
cryptography	42.0.5
cuda	12.2.2
cuda-cccl	12.2.140
cuda-command-line-tools	12.2.2
cuda-compiler	12.2.2
cuda-cudart	12.2.140
cuda-cudart-dev	12.2.140
cuda-cudart-static	12.2.140
cuda-cuobjdump	12.2.140
cuda-cupti	12.2.142
cuda-cupti-static	12.2.142
cuda-cuxxfilt	12.2.140
cuda-demo-suite	12.2.140
cuda-documentation	12.2.140
cuda-driver-dev	12.2.140

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Package Name	Package Version
cuda-gdb	12.2.140
cuda-libraries	12.2.2
cuda-libraries-dev	12.2.2
cuda-libraries-static	12.2.2
cuda-nsight	12.2.144
cuda-nsight-compute	12.2.2
cuda-nvcc	12.2.140
cuda-nvdisasm	12.2.140
cuda-nvml-dev	12.2.140
cuda-nvprof	12.2.142
cuda-nvprune	12.2.140
cuda-nvrtc	12.2.140
cuda-nvrtc-dev	12.2.140
cuda-nvrtc-static	12.2.140
cuda-nvtx	12.2.140
cuda-nvvp	12.2.142
cuda-opencl	12.2.140
cuda-opencl-dev	12.2.140
cuda-profiler-api	12.2.140
cuda-runtime	12.2.2
cuda-sanitizer-api	12.2.140
cuda-toolkit	12.2.2
cuda-tools	12.2.2
cuda-visual-tools	12.2.2
cycler	0.12.1
cymem	2.0.8
cython	3.0.10
cytoolz	0.12.3
dask	2024.4.2
dask-core	2024.4.2
dask-expr	1.0.12
datalayer-kernels	0.0.7
dav1d	1.2.1
debugpy	1.8.1
decorator	5.1.1
defusedxml	0.7.1
deprecation	2.1.0
dill	0.3.8
distributed	2024.4.2
distro	1.9.0
entrypoints	0.4
et_xmlfile	1.1.0
exceptiongroup	1.2.0
executing	2.0.1
fastai	2.7.17
fastcore	1.7.8
fastdownload	0.0.7
fastprogress	1.0.3
filelock	3.16.1
fmt	10.2.1

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Package Name	Package Version
fonttools	4.51.0
fqdn	1.5.1
freetype	2.12.1
frozenlist	1.4.1
fsspec	2024.3.1
gds-tools	1.9.1.3
gflags	2.2.2
giflib	5.2.2
gitdb	4.0.11
gitpython	3.1.43
glog	0.7.0
gmp	6.3.0
gmpy2	2.1.2
greenlet	3.0.3
h11	0.14.0
h2	4.1.0
h5py	3.11.0
hdf5	1.14.3
hpack	4.0.0
httpcore	1.0.5
httpx	0.27.0
huggingface-hub	0.25.0
hyperframe	6.0.1
icu	73.2
idna	3.7
imagecodecs	2024.1.1
imageio	2.34.0
importlib-metadata	7.1.0
importlib_metadata	7.1.0
importlib_resources	6.4.0
intake	2.0.7
ipykernel	6.29.3
ipympl	0.9.4
ipython	8.22.2
ipython_genutils	0.2.0
ipywidgets	8.0.4
isoduration	20.11.0
jedi	0.19.1
jinja2	3.1.3
joblib	1.4.0
json5	0.9.25
jsonpatch	1.33
jsonpointer	2.4
jsonschema	4.21.1
jsonschema-specifications	2023.12.1
jsonschema-with-format-nongpl	4.21.1
jupyter-lsp	2.2.5
jupyter-packaging	0.12.0
jupyter-server	2.12.0.dev0
jupyter-server-mathjax	0.2.6

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Package Name	Package Version
jupyter-server-proxy	3.2.1
jupyter_client	8.6.1
jupyter_core	5.7.2
jupyter_events	0.10.0
jupyter_server_terminals	0.5.3
jupyter_telemetry	0.1.0
jupyterhub	4.1.5
jupyterhub-base	4.1.5
jupyterlab	4.1.0b0
jupyterlab-git	0.50.0
jupyterlab_pygments	0.3.0
jupyterlab_server	2.26.0
jupyterlab_widgets	3.0.10
jxrlib	1.1
keyutils	1.6.1
kiwisolver	1.4.5
krb5	1.21.2
langchain	0.3.0
langchain-core	0.3.1
langchain-text-splitters	0.3.0
langcodes	3.4.0
langsmith	0.1.122
language-data	1.2.0
lazy_loader	0.4
lcms2	2.16
ld_impl_linux-64	2.4
lerc	4.0.0
libabseil	20240116.1
libaec	1.1.3
libarchive	3.7.2
libarrow	15.0.2
libarrow-acero	15.0.2
libarrow-dataset	15.0.2
libarrow-flight	15.0.2
libarrow-flight-sql	15.0.2
libarrow-gandiva	15.0.2
libarrow-substrait	15.0.2
libavif16	1.0.4
libblas	3.9.0
libbrotlicommon	1.1.0
libbrotlidec	1.1.0
libbrotlienc	1.1.0
libcblas	3.9.0
libcrc32c	1.1.2
libcublas	12.4.5.8
libcublas-dev	12.4.5.8
libcublas-static	12.4.5.8
libcufft	11.2.1.3
libcufft-dev	11.2.1.3
libcufft-static	11.2.1.3

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Table 287 – continued from previous page

Package Name	Package Version
libcufile	1.9.1.3
libcufile-dev	1.9.1.3
libcufile-static	1.9.1.3
libcurand	10.3.5.147
libcurand-dev	10.3.5.147
libcurand-static	10.3.5.147
libcurl	8.7.1
libcusolver	11.6.1.9
libcusolver-dev	11.6.1.9
libcusolver-static	11.6.1.9
libcusparse	12.3.1.170
libcusparse-dev	12.3.1.170
libcusparse-static	12.3.1.170
libdeflate	1.2
libedit	3.1.20191231
libev	4.33
libevent	2.1.12
libexpat	2.6.2
libffi	3.4.2
libgcc	14.1.0
libgcc-ng	14.1.0
libgfortran-ng	13.2.0
libgfortran5	13.2.0
libgomp	14.1.0
libgoogle-cloud	2.22.0
libgoogle-cloud-storage	2.22.0
libgrpc	1.62.2
libhwy	1.1.0
libiconv	1.17
libjpeg-turbo	3.0.0
libjxl	0.10.2
liblapack	3.9.0
liblapacke	3.9.0
libllvm14	14.0.6
libllvm16	16.0.6
libmamba	1.5.8
libmambapy	1.5.8
libnghttp2	1.58.0
libnl	3.9.0
libnpp	12.2.5.30
libnpp-dev	12.2.5.30
libnpp-static	12.2.5.30
libnsl	2.0.1
libnvjitlink	12.4.127
libnvjitlink-dev	12.4.127
libnvjpeg	12.3.1.117
libnvjpeg-dev	12.3.1.117
libnvjpeg-static	12.3.1.117
libopenblas	0.3.27
libparquet	15.0.2

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Table 287 – continued from previous page

Package Name	Package Version
libpng	1.6.43
libprotobuf	4.25.3
libre2-11	2023.09.01
libsodium	1.0.18
libsolv	0.7.28
libsqlite	3.45.3
libssh2	1.11.0
libstdcxx-ng	13.2.0
libthrift	0.19.0
libtiff	4.6.0
libutf8proc	2.8.0
libuuid	2.38.1
libuv	1.48.0
libwebp-base	1.4.0
libxcb	1.15
libxcrypt	4.4.36
libxml2	2.12.6
libzlib	1.2.13
libzopfli	1.0.3
llvm-openmp	18.1.3
llvmlite	0.42.0
locket	1.0.0
lz4	4.3.3
lz4-c	1.9.4
lzo	2.1
mako	1.3.3
mamba	1.5.8
marisa-trie	1.2.0
markdown-it-py	3.0.0
markupsafe	2.1.5
matplotlib-base	3.8.4
matplotlib-inline	0.1.7
mdurl	0.1.2
menuinst	2.0.2
mistune	3.0.2
mpc	1.3.1
mpfr	4.2.1
mpmath	1.3.0
msgpack-python	1.0.7
multidict	6.1.0
munkres	1.1.4
murmurhash	1.0.10
nbclassic	1.0.0
nbclient	0.10.0
nbconvert	7.16.3
nbconvert-core	7.16.3
nbconvert-pandoc	7.16.3
nbdime	4.0.1
nbformat	5.10.4
ncurses	6.4.20240210

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Table 287 – continued from previous page

Package Name	Package Version
nest-asyncio	1.6.0
networkx	3.3
nodejs	20.9.0
nomkl	1
notebook	7.1.3
notebook-shim	0.2.4
nsight-compute	2024.1.1.4
numba	0.59.1
numexpr	2.9.0
numpy	1.26.4
nvidia-cublas-cu12	12.1.3.1
nvidia-cuda-cupti-cu12	12.1.105
nvidia-cuda-nvrtc-cu12	12.1.105
nvidia-cuda-runtime-cu12	12.1.105
nvidia-cudnn-cu12	9.1.0.70
nvidia-cufft-cu12	11.0.2.54
nvidia-curand-cu12	10.3.2.106
nvidia-cusolver-cu12	11.4.5.107
nvidia-cusparse-cu12	12.1.0.106
nvidia-nccl-cu12	2.20.5
nvidia-nvjitlink-cu12	12.6.68
nvidia-nvtx-cu12	12.1.105
oauthlib	3.2.2
openblas	0.3.27
openjpeg	2.5.2
openpyxl	3.1.2
openssl	3.3.2
orc	2.0.0
orjson	3.10.7
overrides	7.7.0
packaging	24
pamela	1.1.0
pandas	2.2.2
pandoc	3.1.13
pandocfilters	1.5.0
parso	0.8.4
partd	1.4.1
patsy	0.5.6
pexpect	4.9.0
pickleshare	0.7.5
pillow	10.3.0
pip	24
pkgutil-resolve-name	1.3.10
platformdirs	4.2.0
plotly	5.24.1
pluggy	1.5.0
preshed	3.0.9
prometheus_client	0.20.0
prompt-toolkit	3.0.42
protobuf	4.25.3

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Table 287 – continued from previous page

Package Name	Package Version
psutil	5.9.8
pthread-stubs	0.4
ptyprocess	0.7.0
pure_eval	0.2.2
py-cpuinfo	9.0.0
pyarrow	15.0.2
pyarrow-hotfix	0.6
pybind11-abi	4
pycosat	0.6.6
pycparser	2.22
pycurl	7.45.3
pydantic	2.9.2
pydantic-core	2.23.4
pygments	2.17.2
pyjwt	2.8.0
pyopenssl	24.0.0
pyparsing	3.1.2
pysocks	1.7.1
pytables	3.9.2
python	3.11.9
python-dateutil	2.9.0
python-fastjsonschema	2.19.1
python-json-logger	2.0.7
python-tzdata	2024.1
python_abi	3.11
pytz	2024.1
pywavelets	1.4.1
pyyaml	6.0.1
pyzmq	26.0.2
rav1e	0.6.6
rdma-core	51
re2	2023.09.01
readline	8.2
referencing	0.34.0
regex	2024.9.11
reproc	14.2.4.post0
reproc-cpp	14.2.4.post0
requests	2.31.0
rfc3339-validator	0.1.4
rfc3986-validator	0.1.1
rich	13.8.1
rpds-py	0.18.0
ruamel.yaml	0.18.6
ruamel.yaml.clib	0.2.8
s2n	1.4.12
safetensors	0.4.5
scikit-image	0.22.0
scikit-learn	1.4.2
scipy	1.13.0
seaborn	0.13.2

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Table 287 – continued from previous page

Package Name	Package Version
seaborn-base	0.13.2
send2trash	1.8.3
setuptools	69.5.1
shellingham	1.5.4
simpervisor	1.0.0
six	1.16.0
smart-open	7.0.4
smmap	5.0.0
snappy	1.2.0
sniffio	1.3.1
sortedcontainers	2.4.0
soupsieve	2.5
spacy	3.7.6
spacy-legacy	3.0.12
spacy-loggers	1.0.5
sqlalchemy	2.0.29
srsly	2.4.8
stack_data	0.6.2
statsmodels	0.14.1
svt-av1	2.0.0
sympy	1.12
tblib	3.0.0
tenacity	8.5.0
terminado	0.18.1
thinc	8.2.5
threadpoolctl	3.4.0
tifffile	2024.4.18
tinycss2	1.2.1
tk	8.6.13
tokenizers	0.19.1
tomli	2.0.1
tomlkit	0.13.2
toolz	0.12.1
torch	2.4.1
torchaudio	2.4.1
torchvision	0.19.1
tornado	6.4
tqdm	4.66.2
traitlets	5.14.3
transformers	4.44.2
triton	3.0.0
truststore	0.8.0
typer	0.12.5
types-python-dateutil	2.9.0.20240316
typing-extensions	4.11.0
typing_extensions	4.11.0
typing_utils	0.1.0
tzdata	2024a
ucx	1.15.0
uri-template	1.3.0

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Table 287 – continued from previous page

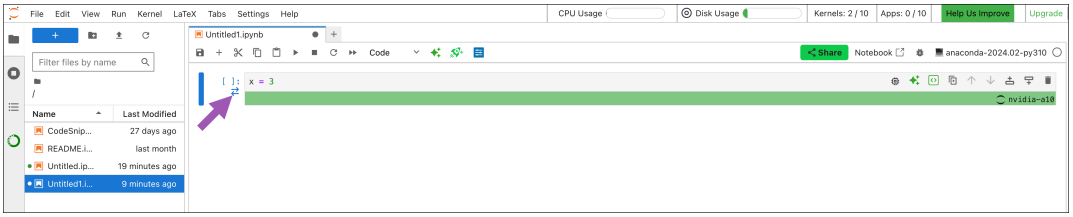
Package Name	Package Version
urllib3	2.2.1
wasabi	1.1.3
wcwidth	0.2.13
weasel	0.4.1
webcolors	1.13
webencodings	0.5.1
websocket-client	1.7.0
wheel	0.43.0
widgetsnbextension	4.0.10
wrapt	1.16.0
xlrd	2.0.1
xorg-libxau	1.0.11
xorg-libxdmcp	1.1.3
xyzservices	2024.4.0
xz	5.2.6
yaml	0.2.5
yaml-cpp	0.8.0
yarl	1.11.1
zeromq	4.3.5
zfp	1.0.1
zict	3.0.0
zipp	3.17.0
zlib	1.2.13
zlib-ng	2.0.7
zstandard	0.22.0
zstd	1.5.5

Transferring variables in GPU kernel cells

Because cells assigned a GPU kernel run in a separate environment from the rest of the notebook, variables must be transferred between the cell and the notebook to ensure they are accessible in both environments.

Follow these steps to transfer variables:

1. Click **Variable transfer** beside a cell with a GPU kernel assigned.



2. Enter the inputs and/or outputs to be transferred between the notebook and cell environments.
3. Click **Set variables**.

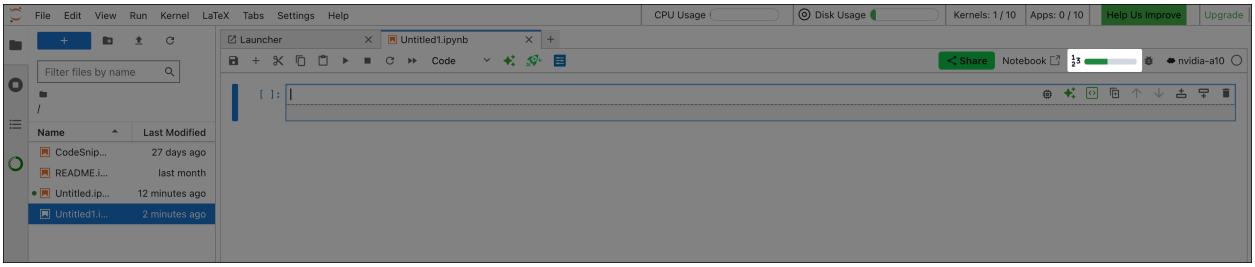
The inputs and/or outputs can now be used in the GPU kernel cell and notebook.

Managing usage

When you assign a GPU kernel to a notebook, you are asked to reserve a defined number of minutes to use toward the notebook's GPU execution time. Reserved time is calculated in credits, with one credit equaling 100 real-world seconds.

Once the notebook launches, the reserved time starts to count down. The reserved time continues to count down both when running code and when the notebook is idle.

Track how much reserved time is left by hovering over the top-right countdown bar:



Caution: When your reserved time drops below five minutes (300 seconds), the countdown bar turns red. Once the reserved time hits zero, the GPU kernel session automatically terminates.

Anaconda recommends conserving your GPU usage by either assigning a GPU kernel to individual cells that require higher compute power rather than the entire notebook, or waiting to assign the GPU kernel until you're ready to run your code, and then stopping the GPU kernel session as soon as the code has executed.

There are multiple ways you can stop a GPU kernel session:

Kernel menu

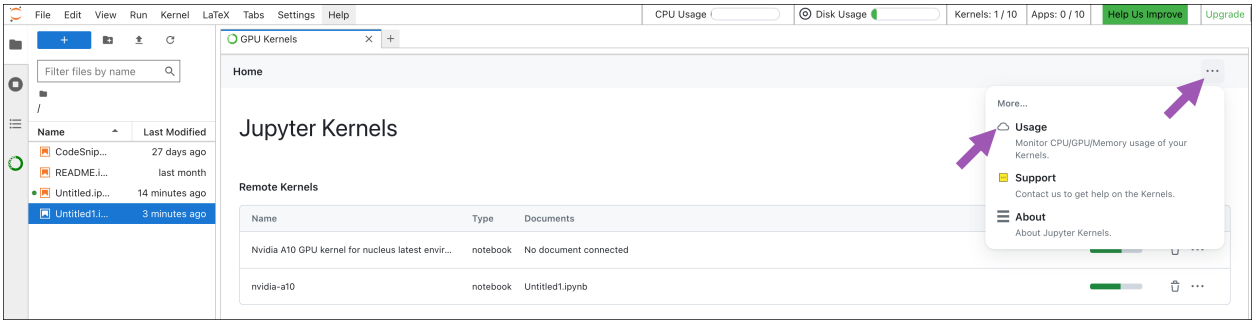
1. Select **Kernels** from the top menu bar.
2. Select **Shut Down All** to shut down all kernels.
3. In the confirmation dialog, click **Shut Down All**.

Jupyter kernels home page

1. In a notebook with an assigned GPU kernel, click the top-right countdown bar.
2. On the Jupyter Kernels page, click **Delete** next to the kernel you'd like to shut down.

Usage history

View your GPU usage stats and remaining credits by clicking the top-right actions dropdown on the Jupyter Kernels home page, then selecting *Usage*:



- The **Overview** page shows your running GPU kernels, remaining credits, and historical credit consumption.
- The **History** page shows your usage history, including GPU session kernel names, types, start date, end date, credits used, and session duration.
- The **Reservations** page shows any currently running GPU kernels, the credits assigned to the reservation session, and the reservation start and end times.

Using credits

Anaconda offers credits to access GPU compute time. One credit equals 100 real-world seconds. Note that this is different from how *high-compute seconds* are calculated for CPU use.

Credits are automatically deducted as reserved time is used. For example, if you use 10 minutes of reserved time, 6.00 credits will be deducted from your account.

View your remaining credits on the Usage Overview page.

At this time, Anaconda is offering 500 free credits to select paid subscribers only. See *note* for details on upgrading your subscription to gain access.

Troubleshooting

I ran out of credits

To request additional GPU credits, file a support ticket.

The GPU kernel does not start up

Reload the Anaconda Notebooks page and then click “Launch a Remote Kernel” from the Launcher. If you’re still unable to run a GPU kernel, file a support ticket.

My code isn’t running

Check for missing import statements and verify that variables were correctly *transferred* to the GPU kernel.

Data storage and memory

As you produce more notebooks and environments in Anaconda Notebooks, you may begin to run out of storage and find that processes slow down. This topic explains how data storage and memory usage work in Anaconda Notebooks and provides instructions to resolve these issues.

Anaconda Notebooks provides varying levels of cloud storage and CPU "high-compute" seconds based on your Anaconda tier level.

What is a high-compute second?

A CPU second is one second of running code on a single CPU core at 100%. We refer to them as "high-compute seconds" on our pricing page to clearly distinguish CPU seconds from real-world seconds. Simply running JupyterLab, writing code, and using the interface don't really use up quota (though they have a small impact). Only running Python code from within a notebook and running commands from the terminal count against your quota, and even then very few command functions truly tax the CPU.

For example, if your code makes an HTTP request, then it will use a tiny amount of CPU time assembling the request and sending it out over the network, but will then use no CPU at all while it's waiting for a response. When the response comes back from the other end, then it will again use a small amount of CPU to interpret the response and provide your code with the results. So, in general, CPU time is only used while your program is actively making calculations, not while it is waiting for other systems.

When does the clock on CPU seconds reset?

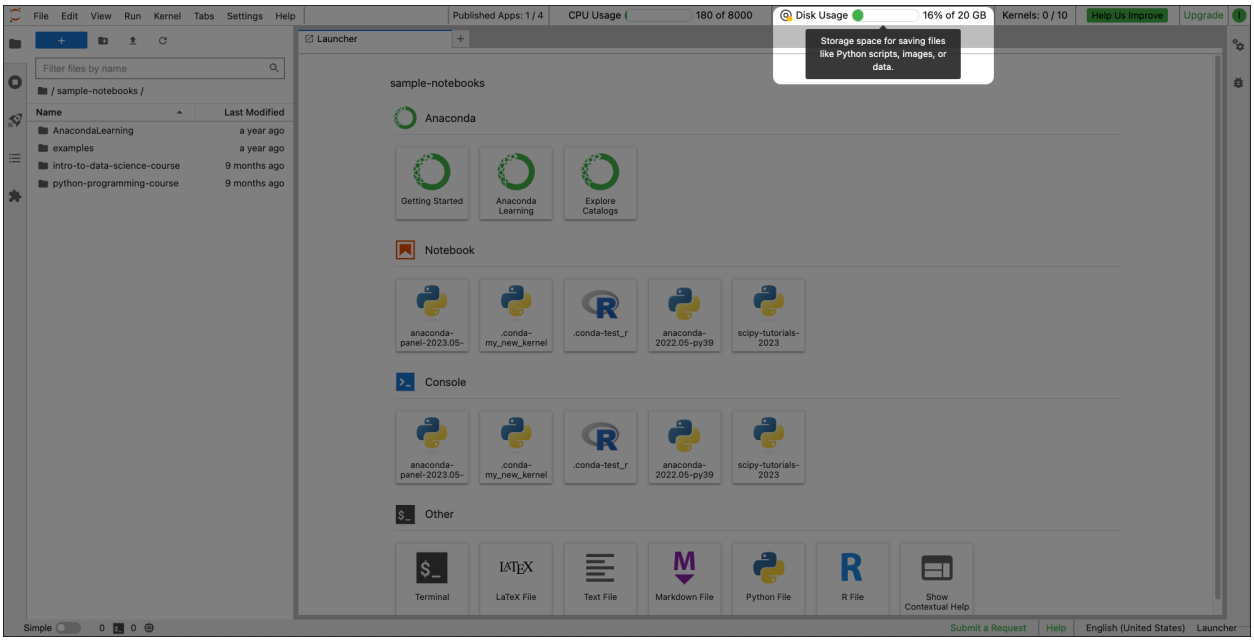
Our notebook service accounts have a per-day limit for the maximum number of seconds fully utilizing the CPU. Once an instance hits that limit, it is not shut down, but instead given lower CPU priority and a limit to the amount of compute resources available. This limit is reset every day, so full compute access will be restored the next day.

Capabilities	Free	Starter	Pro*/Business	Enterprise
Fast, backed-up SSD storage	5GB	10GB	20GB	Unlimited
CPU seconds (daily)	1,000	8,000	20,000	Unlimited

Note: * Pro is a legacy tier no longer available for purchase.

Data storage

You can monitor your available cloud storage space with the **Disk Usage** meter at the top of the screen. If you're maxing out your storage space, the most likely culprits are custom environments, which are all the environments you see in the Disk Manager. To gain more storage, delete these environments (and optionally download them for later use) or upgrade your subscription.

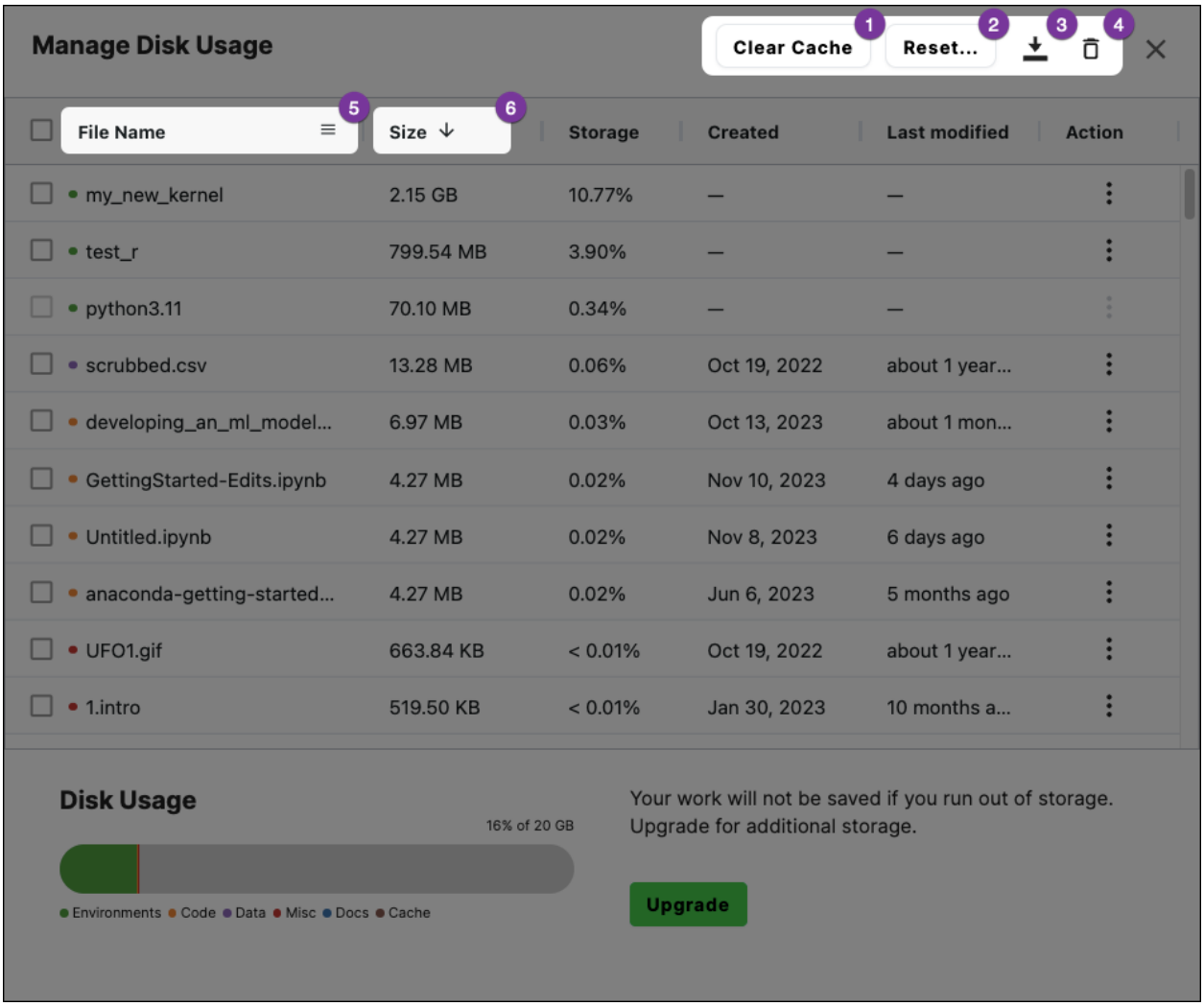


What kind of storage does Anaconda Notebooks use?

Anaconda Notebooks uses persistent Elastic Block Store (EBS) storage: a fast, backed-up, SSD storage that supports common data science and machine learning workloads. EBS storage is generally faster and more reliable than most cloud-hosted options.

Managing disk usage

You can view and manage all your files by clicking anywhere on the **Disk Usage** meter to open the Disk Manager:



1 - Clear Cache
Anaconda recommends clearing your cache on a regular basis to save on space.

2 - Reset…
Restores all selected items to their default state. Select **Download items before deleting** to ensure you don't lose valuable work.

3 - Download
Downloads selected files. Consider downloading valuable files before deleting.

4 - Delete
Deletes selected files.

5 - File Name
Hovering over the **File Name** column header exposes a filter tool to further sort through your files. Clicking **File Name** orders (and reverses the order of) files alphabetically.

6 - Size
Clicking **Size** orders (and reverses the order of) files by size.

Removing custom environments

Caution: Creating custom environments consumes a large amount of storage. Free tier users are recommended to avoid complex environment building and to limit this to one environment at a time. Upgrade to work with more custom environments.

1. In a terminal within Anaconda Notebooks, run `conda env list` and see if there are any environments *NOT* in `/opt/conda`.
2. If there are, you can remove those unwanted environments in the Disk Manager as shown in the previous section, or by running:

```
# Replace <ENV_NAME> with the environment name
conda env remove --name <ENV_NAME>
```

3. Further, clear out the cache and other artifacts by clicking **Clear Cache** in the Disk Manager as shown in the previous section, or by running:

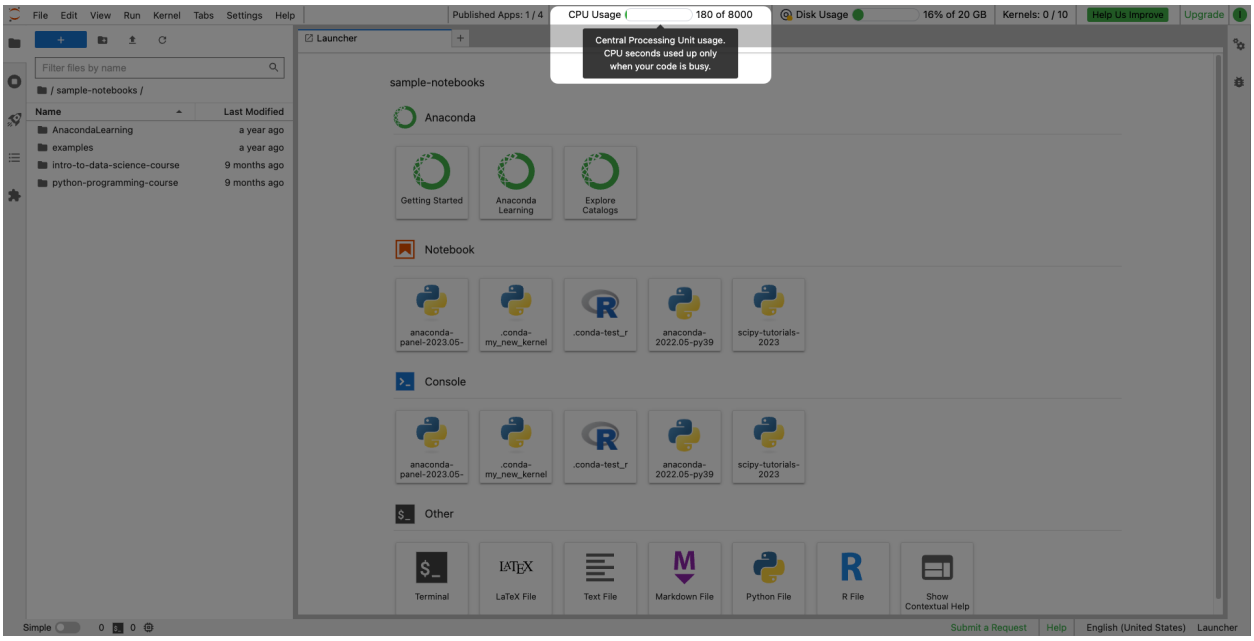
```
conda clean --all
pip cache purge
rm -rf /tmp/*
```

Memory

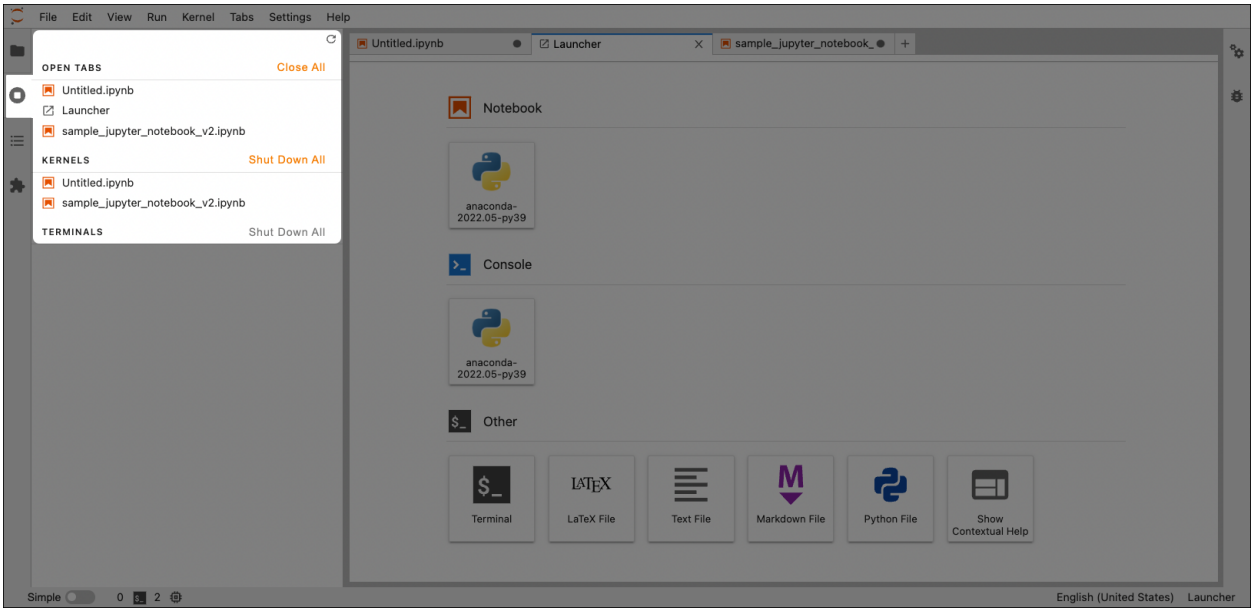
If your notebook is running slowly, you may have exceeded your CPU usage limit for the day. You will still be able to work when this happens, but the performance will be affected (e.g loading a `.csv` file with pandas may take 10 seconds instead of half a second). The limit resets daily.

Anaconda Notebooks limits processes to 6GB of RAM per kernel. Exceeding this limit terminates your process, at which point you will need to restart your kernel. If you need to run larger processes, please contact us at sales@anaconda.com.

To see current progress towards your daily quota, refer to the **CPU Usage** widget at the top of Anaconda Notebooks.



To better manage your CPU usage, regularly check the **Running Terminals and Kernels** tab in the left sidebar and shut down unnecessary kernels when you no longer need them.



Publishing notebooks

This topic provides guidance on previewing and publishing your Panel apps as working applications with a custom URL. This spins up an application on the Anaconda Notebooks infrastructure, which you can then share with others.

Previewing Panel apps

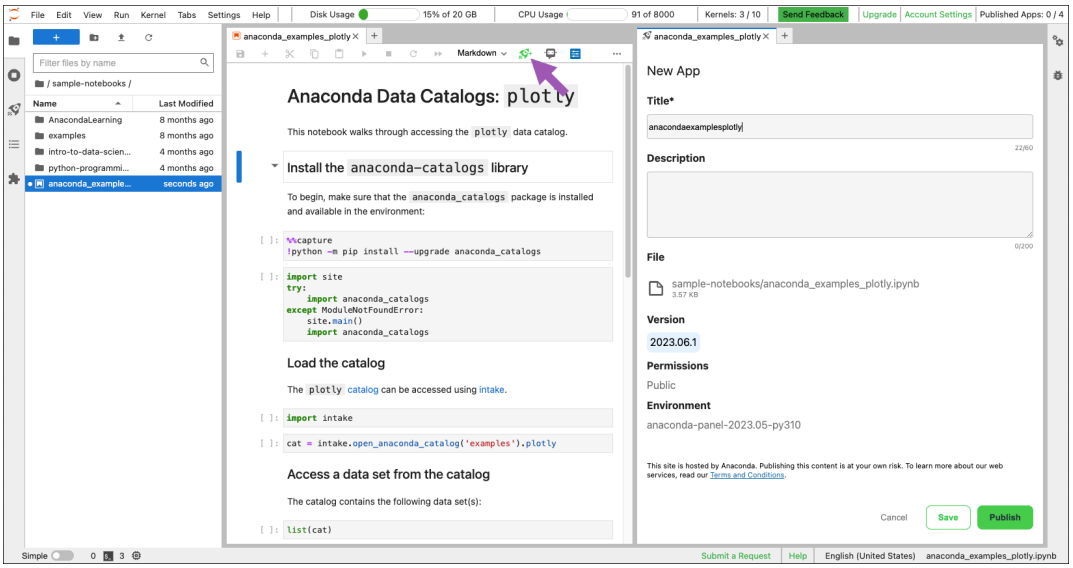
You can render a working preview of the Panel apps in your notebook by clicking **Preview with Panel** at the top of your notebook. To create a valid Panel application, one or more of your outputs must be marked as `.servable()`. See Troubleshooting below for further details.

Note: Rendering a preview of Panel apps uses CPU seconds.

Publishing Panel apps

To publish the results of your Panel apps to a custom URL, complete the following steps:

1. Click **Save and publish** at the top of the notebook.



2. Provide a title and detailed description.

   Note: Your notebook's version is displayed within the form and automatically increments each time you save changes to or redeploy your notebook.

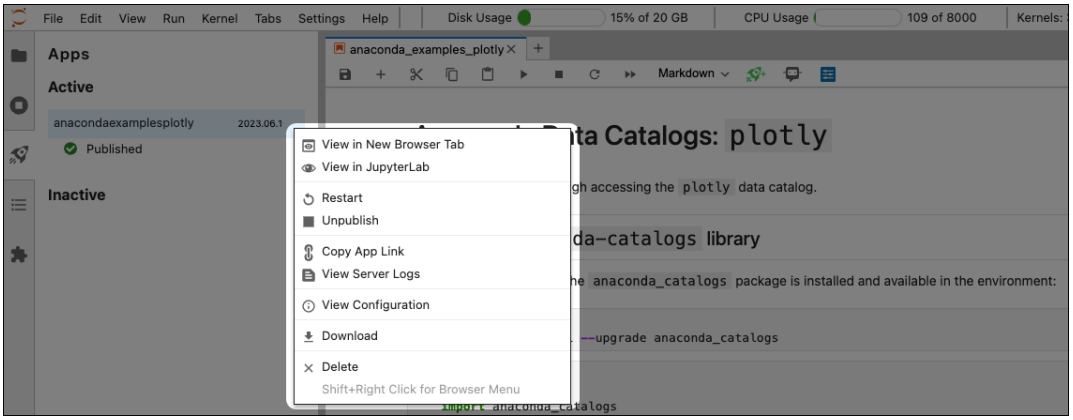
   ---

3. Optional: Click **Save** to produce an inactive (i.e. unpublished) app. To see your unpublished and published apps, click **Publish** in the left-hand navigation to open the **Apps** panel.
4. Click **Publish**. You are provided a randomly generated URL for your application, which can be shared with others.

   Note: The page will appear as a 502 Bad Gateway until the publication process is complete.

   ---

5. Click the publish icon in the left-hand navigation to open the **Apps** panel. Your application is now listed under **Active**.
6. View, unpublish, download, and more by clicking actions beside your app in the **Apps** panel.



Publishing limits

The number of applications you can publish depends on your Anaconda subscription tier.

Capabilities	Free	Starter	Pro*/Business	Enterprise
Published applications	1	4	10	Unlimited

Note: * Pro is a legacy tier no longer available for purchase.

Further Panel resources

Anaconda Notebooks allows you to deploy your data applications via Panel with just two clicks directly from your notebooks. Check out the following resources for a deeper dive into Panel:

- Familiarize yourself with Panel with the getting started guide
- Discover how to use specific features in the how-to guide
- Learn about the different components and how to use them with the component gallery
- Gain inspiration from the app gallery

Troubleshooting

I published a Panel application, but the application is blank.

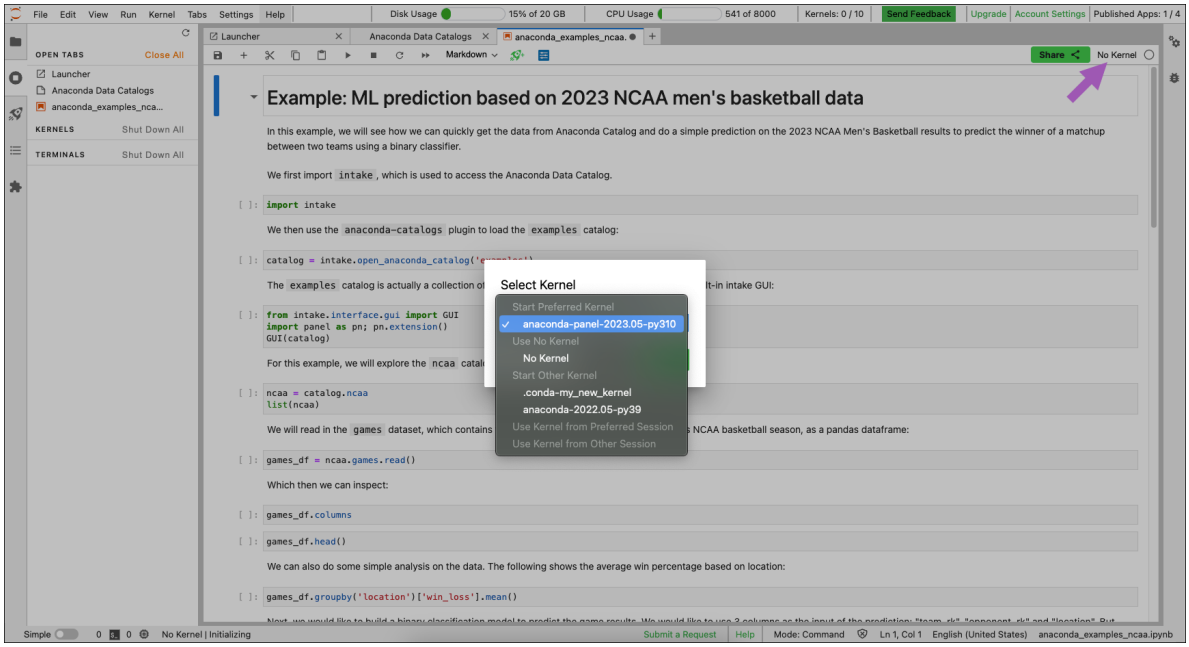
There are a couple of reasons your application may not be rendering:

1. To create a valid Panel application, one or more of your outputs must be marked as `.servable()`. Take this minimal "Hello, World!" program, for example:

```
import panel as pn
pn.Row("Hello, World!").servable()
```

   If you added content to your application but there's still nothing showing up, ensure that your notebook can be run from top to bottom. The easiest way to test this is to click **Kernel** in the menu bar, then select **Restart Kernel and Run All Cells..** from the dropdown.

2. Ensure you have selected the `anaconda-panel-2023.05-py310` kernel from the kernel selector in the top-right of your notebook.



I published an application but it's stuck in a "publishing" state.

If your application is stuck in the "Your app is being published" state, check your notebook error logs. Address any issues raised and republish.

Sharing notebooks

When you're ready for others to interact with your notebook, you can share a copy of the notebook via a direct link or a clickable "badge" on a webpage. This is great if, for example, you're a teacher looking to provide an easy way for students to access notebooks from your GitHub account, or you're a developer looking for feedback (and praise) on a project from your colleagues.

What are notebook badges?

Using a consistent and recognizable style, badges are clickable tiles that provide direct access to a notebook. Add these badges to websites, blog posts, documentation, GitHub repositories, or social media posts so anyone can open your notebook in a new instance of Anaconda Notebooks.

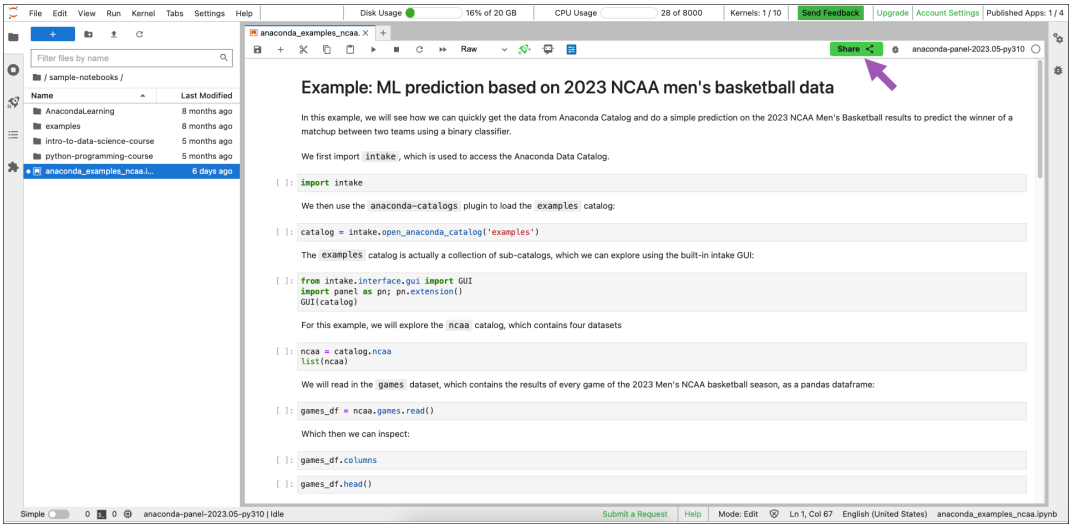
Badges can be created directly in Anaconda Notebooks by clicking **Share** at the top of your notebook, as shown in the following section. This provides you with HTML for a badge, which can be copied and embedded anywhere.

You can also generate a badge for notebooks hosted on GitHub and many other sites using this badge creator. For GitHub, use the **Raw** button to get a URL starting with `raw.githubusercontent.com`.

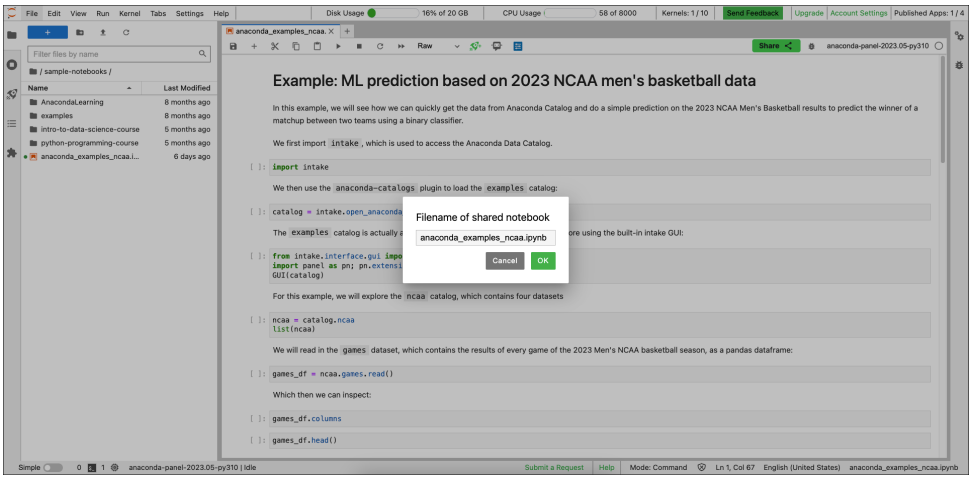
Sharing notebooks

To generate either a direct link or a badge to access a copy of your notebook, complete the following steps:

1. Click **Share** at the top of your notebook.

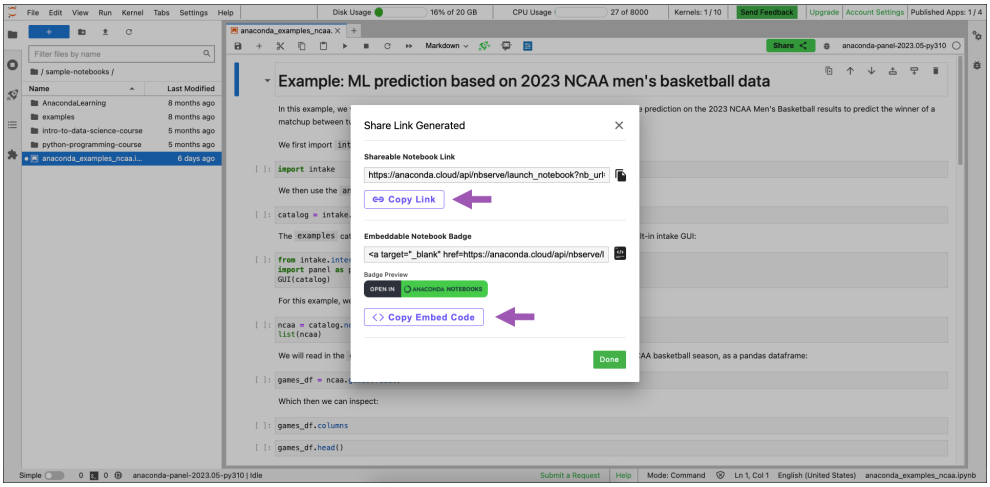


2. Enter a name for your notebook, then click **OK**.



Note: If you receive a 403 error, it is likely because you are a member of an organization that has prohibited notebook sharing. Speak with your organization administrator if you need help.

3. **In the Share Link Generated dialog:**
   - Click **Copy Link** to copy the notebook link to your clipboard. You can now share this link with whomever you want to provide access to a copy of the notebook.
   - Click **Copy Embed Code** to copy the badge HTML to your clipboard. You can now paste this code in your websites, blog posts, documentation, GitHub repositories, or social media posts so anyone can access your notebook.



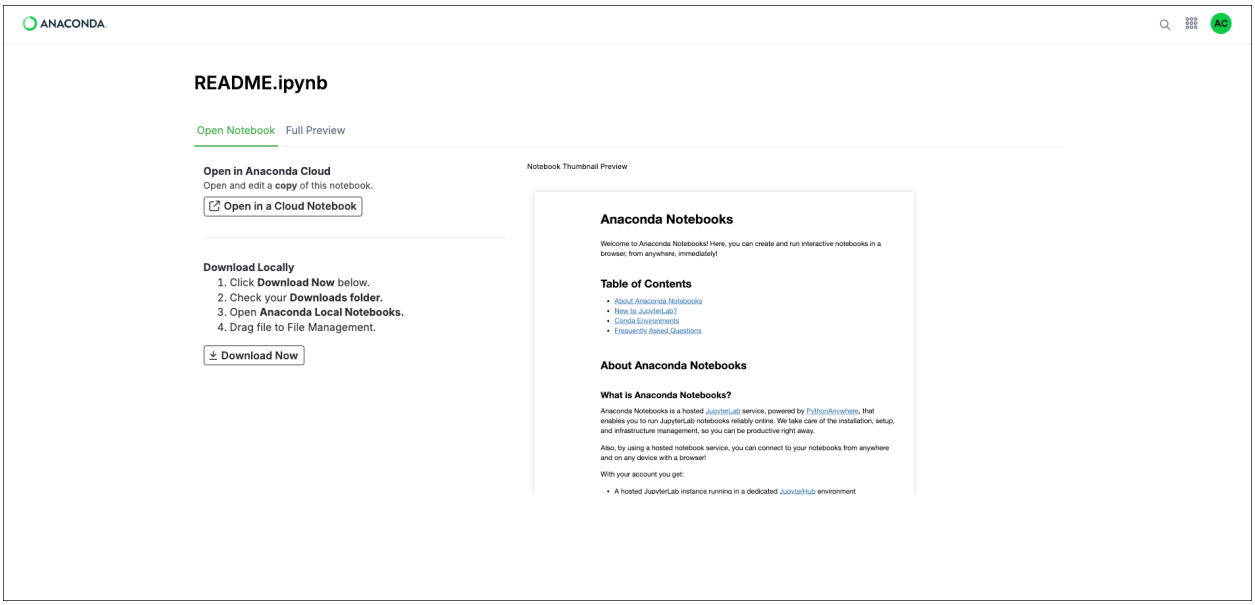
4. Click **Done** to close the dialog.

Users who click the badge but don't have an Anaconda Cloud account will be prompted to create one.

Previewing a notebook

Clicking your shared link takes users to an overview of your notebook on Anaconda Cloud, where they can perform the following actions:

- Open a copy of your notebook in Anaconda Cloud
- Download a copy of your notebook
- Preview your notebook from the **Full Preview** tab



FAQ

General FAQ

What are notebooks and why would I use them?

Jupyter Notebooks provide a web-based interface for creating and sharing computational documents. You can seamlessly mix executable code, documentation, and instructions in one portable document. Notebooks are not only a great portable learning tool, but also a highly capable vehicle for prototyping and producing data science work.

Anaconda Notebooks lets you skip setup and installation and get straight to learning and writing code.

How do I access Anaconda Notebooks?

You can access and use Anaconda Notebooks from any modern web browser and anywhere you have an internet connection.

After you have logged into your account on Anaconda Cloud, go directly to nb.anaconda.cloud or click on “Notebooks” from the top navigation bar of Anaconda Cloud.

What do I have access to?

With Anaconda Notebooks, you get all of the following running on our resilient and supported cloud platform, so you can use it anywhere on any device!

Capabilities	Free	Starter	Pro*/Business	Enterprise
A dedicated JupyterLab notebook interface	✓	✓	✓	✓
Fast, backed-up SSD storage	5GB†	10GB	20GB	Unlimited
CPU seconds (daily)	1,000	8,000	20,000	Unlimited
Published applications	1	4	10	Unlimited
Number of Assistant chats per day	30	60	120	Unlimited
Conda environments with the most popular python packages	✓	✓	✓	✓
Ability to create and upload your own custom environments	✓	✓	✓	✓
Example notebooks	✓	✓	✓	✓

Note: * Pro is a legacy tier no longer available for purchase.

Is Anaconda Notebooks different from JupyterLab and Jupyter Notebooks?

Anaconda Notebooks is a hosted JupyterLab service that enables you to run JupyterLab notebooks reliably online. Your dedicated JupyterLab instance comes preconfigured with persistent cloud storage, hundreds of data science packages, and a managed infrastructure.

To launch an instance of classic Jupyter Notebooks, click **Help** in the menu bar, then select *Launch Classic Notebook*.

Where can I get support?

You can get community support on the Anaconda Community forums. If you're in need of further technical assistance, please file a support ticket.

Which packages are preconfigured on Anaconda Notebooks?

All packages available from the Anaconda installer are preloaded and ready to use through Anaconda Notebooks. The latest release of Anaconda Distribution is always the default environment within Anaconda Notebooks. As new installers are released, new environments become available. For more information about managing environments, see *Environments*.

To see a list of all packages in an environment, run the following command from a terminal or notebook within Anaconda Notebooks:

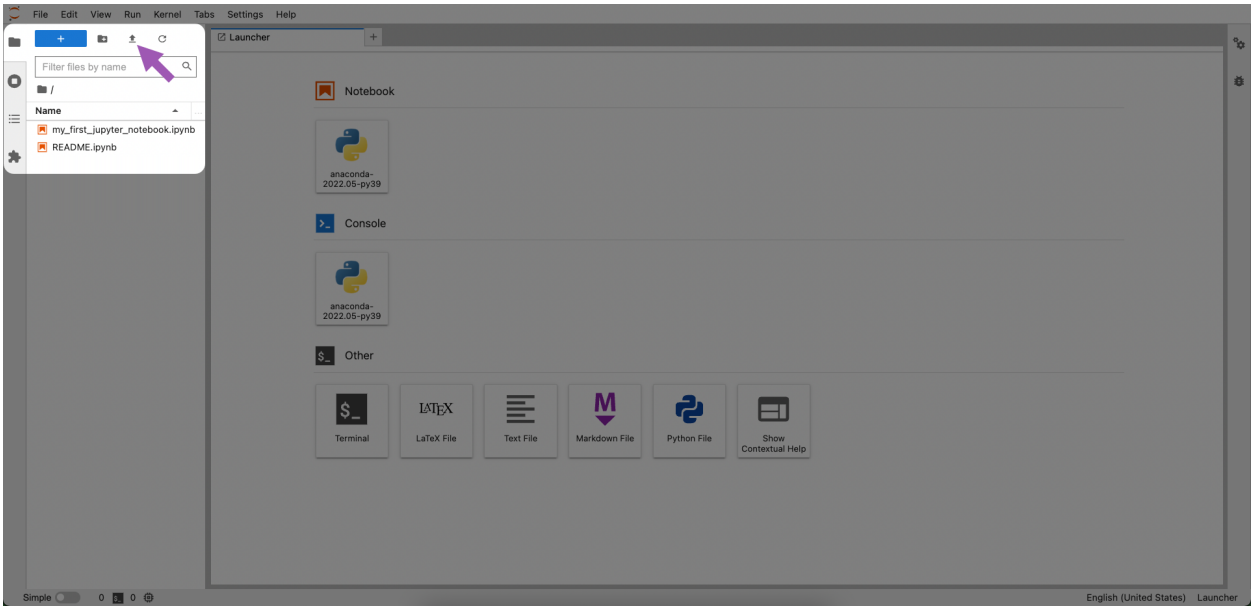
```
conda list
```

Can I share my notebooks?

Yes! Click **Share** at the top of your notebook to produce a shareable link or embeddable HTML for your notebook. See *Sharing Anaconda Notebooks* for more information.

How do I upload a notebook to the service?

In the Anaconda Notebooks JupyterLab interface, click **Upload files** in the File Browser to browse for a local `.ipynb` file. Then, click **Open**. The notebook will appear in the left-hand menu.



You can also drag and drop a notebook from a folder on your system to the file browser to upload it.

How do I save a notebook?

Like most IDEs or editors, JupyterLab has the standard "Save" and "Save As…" functions that will save a notebook in your directory on our platform. You can also download a notebook file from the File menu to save it locally.

Can I use packages from the Professional repository in Anaconda Notebooks?

Packages available from Anaconda Notebooks are a subset of packages available from the public repo.anaconda.com repository. Installing packages from the Professional repository via tokenized access is not currently supported.

Can I install new packages or create custom environments in Anaconda Notebooks?

You can create your own conda environments using any packages that conda can install from repo.anaconda.com. This can be achieved by following the steps in *Environments*.

Can I use Anaconda Notebooks for work?

Anaconda Notebooks alone does not provide *commercial compliance* to its users. Customers accessing Anaconda Notebooks with Pro, Business, or Enterprise subscription tiers are permitted to use all Anaconda products for commercial use. For more details, see our Terms of Service.

I have an organization in Anaconda Cloud. How can my team leverage Anaconda Notebooks?

Registered customers who are part of organizations on Anaconda Cloud can independently access Anaconda Notebooks. Access to Anaconda Notebooks is granted upon member role designation and registration.

Can I control access to Anaconda Notebooks?

Yes. You can prevent your organization members from accessing Anaconda Cloud Notebooks from the organization's **Org Profile** page. For more information, see *Editing organization settings*.

I have a site license. How do I give my members access?

If you are a customer but have not yet registered your organization on Anaconda Cloud, please refer to *this documentation* on how to set up your organization and invite members.

Where are the kernel packages stored?

The `ipykernel` is available from the main channel and the `r-irkernel` is available from the R language channel.

What are the pros and cons of publishing on Anaconda Notebooks versus working on PyScript.com directly?

Publishing on Anaconda Notebooks provides you with a server-hosted app, while PyScript.com offers you a browser-hosted app.

Panel supports both server and browser operation; however, browser-side operations require copying all the data down to the browser, which is impractical when working with large datasets. Additionally, some applications can't be run browser-side because some libraries use operations that are not available in WASM (e.g., libraries like `numba`, `dask`, or `pytorch`). In other words, it's a matter of running on the server or running locally in your browser.

What are data catalogs?

Data catalogs are sample datasets that you can use to familiarize yourself with running and analyzing datasets in a notebook. Access Anaconda's catalogs of pre-populated datasets by selecting **Explore Catalogs** in the Launcher.

Troubleshooting

I'm failing to connect to my instance of Anaconda Notebooks.

General connection and spawn issues can usually be resolved by closing all tabs, waiting a few minutes, and reopening Notebooks. Check Anaconda's status page for ongoing outages.

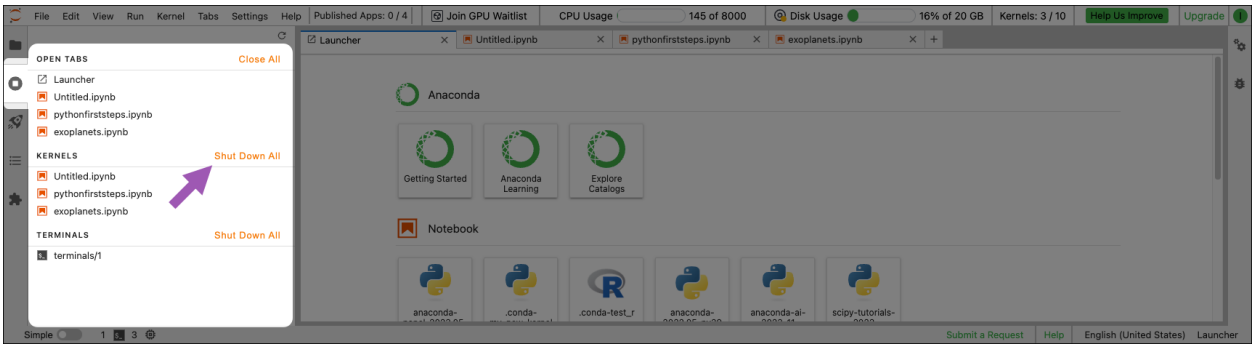
How do I completely reset my Anaconda Notebooks instance?

To completely reset ("factory reset") your instance of Anaconda Notebooks, click anywhere on the **Disk Usage** meter to open the **Manage Disk Usage** dialog. Then, click **Reset…**.

See our *Data storage and memory* topic for further details.

I opened Anaconda Notebooks for the first time today and all my CPU seconds have been used up.

To prevent your CPU seconds from being used while you are not actively using Notebooks, make sure you shut down all kernels in all open instances of Notebooks before logging off for the day. You can do this from the **Running Terminals and Kernels** tab:



If the problem persists, please raise the issue in the Anaconda Community forums or file a support ticket.

My notebook is trying to import a package, but I'm getting an error.

The most common cause of errors is a lack of required package(s) installed in your environment. The default environment we provide, based on the Anaconda distribution, contains hundreds of the most common python packages for data science, but it doesn't include everything. You may need to create a custom environment to install the package you need.

Here are a couple of steps to help resolve this:

Make sure you have the right kernel/environment selected

The default `anaconda-<YEAR>.<MONTH>-py<PYTHON_VERSION>` environments have a broad selection of packages, but you may have created a custom environment for your notebook. Separate environments are represented as "kernels"

in JupyterLab. You can view and switch between available kernels by clicking the kernel name in the upper-right corner of the content pane.

List the packages available in an environment

If one of your imports is failing, start by verifying that the package is present in the kernel environment. You can view which packages are available in your current environment from the terminal by running `conda list`.

To view packages in a specific environment, run `conda list --name <ENV_NAME>`.

To see a list of available environments, run `conda info --envs`. An asterisk appears beside your current active environment.

Create a custom environment

If none of the Anaconda provided environments contain the package(s) you need, create a *custom environment* for your notebook project.

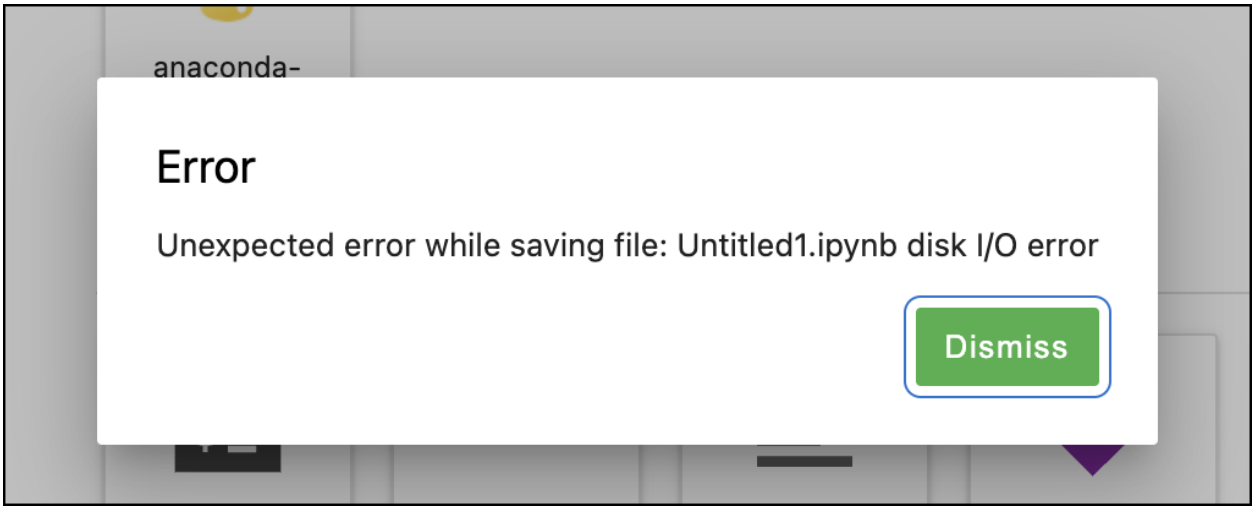
Why isn't my custom environment showing up in the Launcher or Select Kernel modal?

The most common reason an environment is not appearing as a kernel in Anaconda Notebooks is that it doesn't contain a kernel package.

For more information and instructions on installing a kernel package in your environment, see *Environments*.

Why am I receiving an error message?

If you receive a "file load error," "unhandled error," or "unexpected error," like in the following figure, you have most likely exceeded the storage space for your current tier. Follow the steps in the storage question above to remove items from your Notebooks instance, or upgrade to a higher subscription tier.



I'm registered/signed in—why isn't Notebooks opening?

Your browser's pop-up blocker (automatically enabled on Firefox and Safari) may have prevented Notebooks from opening.

Disable your pop-up blocker and try opening Notebooks again from anaconda.cloud.

I have upgraded from the free tier to a paid tier, but I am unable to connect to certain websites.

Unrestricted internet access is only activated in new Notebooks processes. Therefore, Anaconda recommends shutting down all sessions and restarting Notebooks from anaconda.cloud to get the upgrade.

Note: It may take an hour for the upgrade to take effect.

Why does Anaconda use an allowlist?

Anaconda uses an allowlist to prevent malicious actors from using free accounts to hack into and spam other websites anonymously.

Free tier accounts can only access the websites on our allowlist.

Paid tier accounts have unrestricted internet access, as they can be linked to real people via the payment details.

How can I add sites to the allowlist?

To add new sites to the allowlist, submit a request using the Anaconda Notebooks/PythonAnywhere Allow List Request form. We only add sites to the list if they have an official, public, documented API—that is, sites that are designed and intended for machine consumption rather than human consumption.

Note: **GitLab instances**: GitLab instances can be allowlisted if they contain public repositories. To add a GitLab instance to the allowlist, provide a link to the public repository in your request.

How do I activate the debugger?

To activate the debugger, click the bug icon to the right of your active notebook. Learn more about the debugger from JupyterLab's Debugger topic.

Security practices

We do all we can to keep your Anaconda Notebooks account secure, along with the files and data you have stored in it—from fully-patched operating systems to strict internal policies determining when our support staff are allowed to look at your stuff (basically, never without your permission unless your code is causing major systemwide problems, or is probably involved in illegal activities).

What you can do to protect yourself

Follow these best practices to help keep your account secure:

- If you're sharing code with anyone (including on our forums), make sure that you don't post anything with passwords in it. For workarounds, check out Alexandra Souly's TDS article on safe credential use in Notebooks.
- Make sure you use a highly secure password for your Anaconda Cloud login. Anaconda recommends using memorable but unguessable passwords of the kind dreamed up by Randall Munroe of XKCD. There's even a Python package to generate them. A good alternative is to use completely random passwords of at least 16 alphanumeric characters and to store them in a password manager like Keepass.
- Verify your email address to reset your Anaconda Cloud password if you forget it.
- Look out for phishing. Anaconda will never send you an email asking for your password. Also, check the address bar in your browser before typing in your password!
- Don't leave a device that's logged in to Anaconda Notebooks unattended in a public area.
- If working with sensitive information in a public place, use a privacy screen on your device to discourage strangers from viewing your screen.

2.18.8 Anaconda.org

What is Anaconda.org?

Anaconda.org is a package hosting and management service by Anaconda that makes it easy to access, store, and share conda and standard Python packages.

Note: You do not need to log in (or even have an Anaconda.org account) to search for, download, or install public packages.

- Build new conda packages using conda build, then upload them to Anaconda.org for quick sharing or access from anywhere!
- Use the `anaconda-client` command line interface (CLI) tool to manage your account, including authentication, tokens, upload, download, removal, and search.
- Free public package hosting for individuals and organizations hosting up to 3GB of packages.

Getting Started

- Download Anaconda. The Anaconda installer includes conda, `conda-build` and `anaconda-client`.
- Become familiar with conda. A good place to start is the conda cheat sheet and the conda test drive.
- Visit Anaconda.org to search for packages.
- For information on using the `anaconda-client` CLI tool to upload packages to Anaconda.org, see *Getting Started with Anaconda Client*.

User guide

Anaconda.org is a package hosting and management service that makes it easy to access, store, and share conda and standard Python packages. Anaconda.org also makes it easy to stay current with updates made to the packages and environments you are using.

To begin using Anaconda.org, read *Getting started*, then the remaining sections of the user guide as needed.

Getting started with Anaconda Client

You can use Anaconda Client command line interface (CLI) to:

- Connect to and manage your Anaconda.org account.
- Upload *packages* you have created.
- Generate access *tokens* to allow access to private packages.

Note: You can still search for and download packages without having Anaconda Client installed.

Installing Anaconda Client

Use Anaconda Prompt (Terminal on macOS/Linux) to install Anaconda Client.

There are three methods of installation: conda, pip or pip from source. We recommend using conda.

conda:

```
conda install anaconda-client
```

pip:

```
pip install anaconda-client
```

pip from source:

```
pip install git+https://github.com/Anaconda-Platform/anaconda-client
```

Logging in to Anaconda Client from the command line

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
anaconda login
```

Displaying a list of Anaconda Client commands

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
anaconda --help
```

Finding out more about an Anaconda Client command

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <COMMAND_NAME> with the name of the command about which you want more␣
↪information
anaconda <COMMAND_NAME> -h
```

Listing all available Client configuration files

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
anaconda config --files
```

Listing all of your Anaconda Client configuration variables

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
anaconda config --show
```

Finding out more about Anaconda Client

You can learn more about Anaconda Client using the help command, documentation, or by visiting the Anaconda Community forums for community support.

Accounts

All Anaconda.org users can find, download, and use packages without having an Anaconda.org account. *This means packages you upload to your Anaconda.org account are accessible to everyone.* However, you need to create an Anaconda.org account in order to do the following:

- Author packages
- Upload packages
- Access shared, private packages

- Create organizations

Creating a free account

Follow these steps to sign up for a free Anaconda.org account:

1. In a browser, go to Anaconda.org.
2. Make sure the **Sign Up** tab is active.
3. Enter a username.
4. Enter your email address.

   Note: Users who register with an .edu email are granted some additional features.

5. Create a password.

   Note: The password must be at least seven characters long.

6. Enter the password again to confirm it.
7. Read and accept the Terms and Conditions.
8. Confirm you are not a robot.
9. Click **Register For Free**.
10. Verify your account from the email sent to you.
11. Log in to your free account and view your personal dashboard.

Tip: Anaconda.org displays your profile photo if the email address you used to register on Anaconda.org is associated with a Gravatar account. To associate your email address or change your Gravatar profile photo, go to gravatar.com.

Navigating your home page

When you are logged in to Anaconda.org, your profile name appears in the top-right corner of every page. This indicates the name of the currently active user or organization.

Use the **View** dropdown menu to access the following pages:

- **Landscape** - This is your home page, where packages that you have created appear
- **Favorites** - This page contains packages from other users you have starred
- **Packages** - This page only contains packages you have created

Resetting your password

Follow these steps to reset your password:

1. Log in to Anaconda.org.
2. From your profile in the top-right corner, select **Settings**.
3. Click **My Account** in the left-hand menu. Verify your password if prompted.
4. In the **Change Password** section, enter your old password, then enter and confirm a new password.
5. Click **Change Password**.

Upgrading or downgrading your plan

If you require more private packages or storage space than is included in a personal plan, contact Anaconda so we can customize a plan for you.

Creating access tokens

The best way to manage access or make packages private is to create *organizations* or *groups*, which allow you to set separate permissions per package.

You can also control access with the *Token* system. You can use tokens to control access to private repositories, collections, or packages on Anaconda.org. Additionally, the degree of access a token grants is completely configurable at the time of generation. You can generate multiple tokens to control which groups of users have access to certain features if they have the appropriate token.

Generating tokens

Tokens provide varying degrees of access to content within a specified channel depending on the scope assignment. If you need to separate permission levels by package, you can create an *organization* and *groups* within that organization.

Note: By default, tokens expire after one year.

CLI

1. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <YOUR_TOKEN_NAME> with a name of your choosing
# Replace <SCOPE> with a scope(s) from the Scopes dropdown below
anaconda auth --create --name <YOUR_TOKEN_NAME> --scopes '<SCOPE1> <SCOPE2>'
```

   This generates a random alphanumeric string. That string is your token! You can distribute your token to other Anaconda.org users to provide them with a specific, limited set of permissions to interact with your Anaconda.org assets.

2. Add the token to your channel path in your .condarc file by running the following command:

```
# Replace <TOKEN> with your token string
# Replace <CHANNEL> with the channel name
conda config --add channels https://conda.anaconda.org/t/<TOKEN>/<CHANNEL>
```

Or, add a channel with a token and a label:

```
# Replace <TOKEN> with your token string
# Replace <CHANNEL> with the channel name
# Replace <YOUR_TOKEN_NAME> with the label name used in the previous step
conda config --add channels https://conda.anaconda.org/t/<TOKEN>/<CHANNEL>/label/
↪<YOUR_TOKEN_NAME>
```

Scopes

Assign scopes to tokens to set permission levels for token holders. Scopes are provided as a space-separated, quoted list.

Available scopes:

Scope	Permission
`all`	Allow all operations
`repos`	Allow access to all package repositories
`pypi`	Allow all operations on Standard Python repositories
`pypi:upload`	Provides upload permissions to Standard Python repositories
`pypi:download`	Provides download permissions for private packages in Standard Python repositories
`conda`	Allow all operations on conda repositories
`conda:download`	Provides download permissions for private packages in conda repositories
`api`	Allow all API operations
`api:write`	Provides write permissions to actions performed via API
`api:read`	Provides read permissions to actions performed via API
`api:modify-group`	Provides manage permissions to groups via the API

Anaconda.org

1. Log in to Anaconda.org.
2. From your profile in the top-right corner, select **Settings**.
3. Click **Access** in the left-hand menu.
4. Fill out the Create access token form:
    1. Provide a unique token name.

2. Set your token strength to `strong (longer token)`. This generates a strong, completely unique token that is difficult to guess with brute force methods.
3. Set the required scopes for your use case.
4. Set the expiration date.

A notification appears containing your token.

Tip: You can view the token at any time at the bottom of the **Access** page.

1. Click **Create**.

Note: If your token expires, *revoke the token* and create a new one.

Revoking tokens

You can revoke tokens directly on Anaconda.org or from the command line interface (CLI).

CLI

1. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <YOUR_TOKEN_NAME> with the name of the token you want to revoke
anaconda auth --remove <YOUR_TOKEN_NAME>
```

Anaconda.org

1. Log in to Anaconda.org.
2. From your profile in the top-right corner, select **Settings**.
3. Click **Access** in the left-hand menu.
4. At the bottom of the page, click the name of the token you want to revoke.
5. Click **Revoke Token**.

Organizations

An organization enables you to provide access to resources based on group membership. It serves as the custom Anaconda.org URL where your packages are stored. An organization can contain multiple groups.

Creating an organization

As the creator and owner of an organization, you have automatic administrative access to this organization and any packages associated with the organization.

You can view your organizations by clicking your profile in the top-right corner and selecting **Profile** in the dropdown.

Follow these steps to create an organization:

1. Log in to Anaconda.org.
2. From your profile in the top-right corner, select **New Organization**, and then scroll to the bottom of the page.
3. Enter an organization name.

> **Note:** Organization names cannot include spaces or special characters.

#. Enter an email address, then click **Create Organization**. The system displays the dashboard for the new organization.

Deleting an organization

Follow these steps to delete an organization you administer and erase all data associated with it:

1. From your profile in the top-right corner, select **Switch to…**.
2. Select the organization you want to delete.
3. From your profile, select **Settings**.
4. Click **My Account** in the left-hand menu. You may be asked to verify your password.
5. In the **Delete Account** section, click **Delete**.
6. Enter the full name of the organization on the confirmation page that appears, then click **Delete Account**.

Uploading packages to an organization from the CLI

To upload a package to an organization, open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <ORGANIZATION> with your organization name
# Replace <PACKAGE-FILE> with the name of the package
anaconda upload --user <ORGANIZATION> <PACKAGE-FILE>
```

> **Note:** Only the co-owners of an organization may upload packages to the organization.

Groups

A group connects resources (packages, etc.) to the members/users associated with that group. Owners can manage member permissions for group members.

Creating groups

You can create a group to customize access for a group of users.

View your existing groups by clicking your profile in the top-right corner and selecting **Groups** in the dropdown.

Follow these steps to create a group:

1. From your profile in the top-right corner, switch to an organization you have created by selecting **Switch to…**.
2. From your profile, select **Groups**.
3. Click **+New Group**.

> **Note:** If **+New Group** is not present on this page, you may be in your default profile rather than in an organization. If the title of this **Groups** page reads "group membership" rather than "groups", you need to switch to an organization or make one if you have not done so.

4. Give the group a name without any spaces, then click **Create group**.

Customizing users and groups

Follow these steps to add, remove, or edit group and user access for an organization you administer:

1. From your profile in the top-right corner, select the desired organization profile under **Switch to…**.
2. From your profile, select **Groups**.
3. Select the group you want to customize.

From this group page, you can:

- Add and delete group members
- Change the group name
- Adjust permissions for group members
- Delete the group
- Add and delete packages

Adding group members

1. Navigate to the **Group** page at `https://anaconda.org/<ORGANIZATION>/groups/<GROUP>`, where `<ORGANIZATION>` is the organization name and `<GROUP>` is the group name.
2. Under **Members**, enter a member's username, then click **Add**.

Users receive a dashboard notification on Anaconda.org when you add them to an organization.

Changing a group name

1. Navigate to the **Group** page at `https://anaconda.org/<ORGANIZATION>/groups/<GROUP>`, where `<ORGANIZATION>` is the organization name and `<GROUP>` is the group name.
2. Select **Settings**.
3. Under **Name**, enter a new group name, then click **Save**.

Adjusting group member permissions

1. Navigate to the **Group** page at `https://anaconda.org/<ORGANIZATION>/groups/<GROUP>`, where `<ORGANIZATION>` is the organization name and `<GROUP>` is the group name.
2. Select **Settings**.
3. Under **Permissions**, select your desired permission level, then click **Save**.

There are three types of permissions you can grant:

- **Read Only**: Provides access only to the packages. Users in a read-only group can see the list of files within a package and can install them through conda.
- **Read-Write**: Provides access to upload new versions of an existing package, delete files of a package, and manage the individual labels of files. Users in a read-write group cannot upload files for non-existing packages, delete or transfer the package, or lock/unlock labels.
- **Administration**: Provides access to everything except uploading new packages (admin users can still upload to an existing package) and locking/unlocking labels.

Deleting a group

1. Navigate to the **Group** page at `https://anaconda.org/<ORGANIZATION>/groups/<GROUP>`, where `<ORGANIZATION>` is the organization name and `<GROUP>` is the group name.
2. Select **Settings**.
3. At the bottom of the page, click **Remove Group**.

Adding packages

1. Navigate to the **Group** page at `https://anaconda.org/<ORGANIZATION>/groups/<GROUP>`, where `<ORGANIZATION>` is the organization name and `<GROUP>` is the group name.
2. Select **Packages**.
3. Enter the name of the package you want to add in the **Package name** cell, then click **Add**. If you want to add all of the packages in the organization to your group, click **Add all Packages**.

Packages

All files uploaded to Anaconda.org are stored in packages. You can view each Anaconda.org package at its own unique URL, called a *Namespace*, based on the user and package name.

You can create an Anaconda.org package and then upload files into it. Both `tar.bz2` and `.conda` compression files can be uploaded to Anaconda.org. For more information on the `.conda` format, see *Using the .conda compression format*.

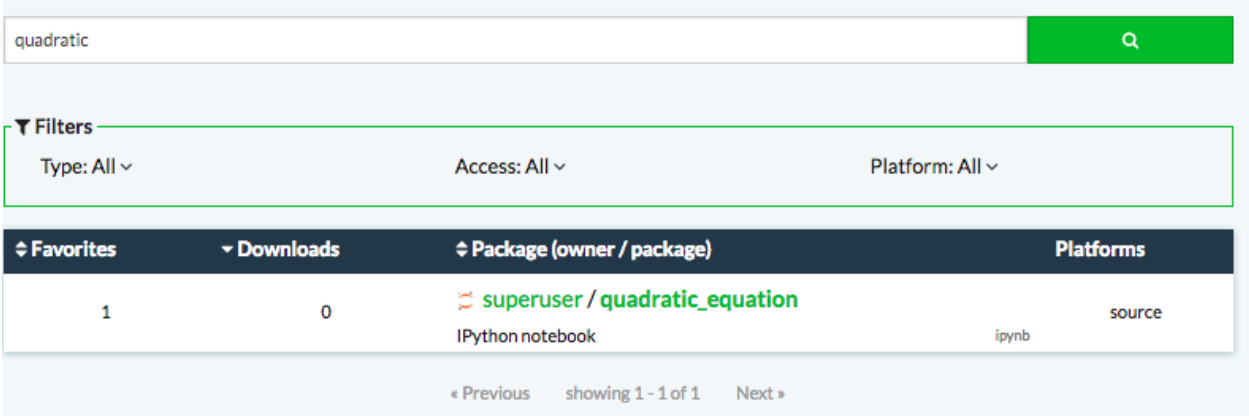
Finding and installing packages

Anaconda.org hosts hundreds of useful Python packages for a wide variety of applications. You do not need to be logged in—or even have an Anaconda.org account—to search for public packages and install them. You do need to be logged in, however, to access authenticated packages, and you'll need a *token* to access other users' *private packages*.

Searching for public packages

Use the search box at the top of the page to locate packages uploaded to Anaconda.org.

Packages that match or partially match your query display when you execute a search. To see more information, click the package name.



Refining your search results

You can filter search results using three filter controls:

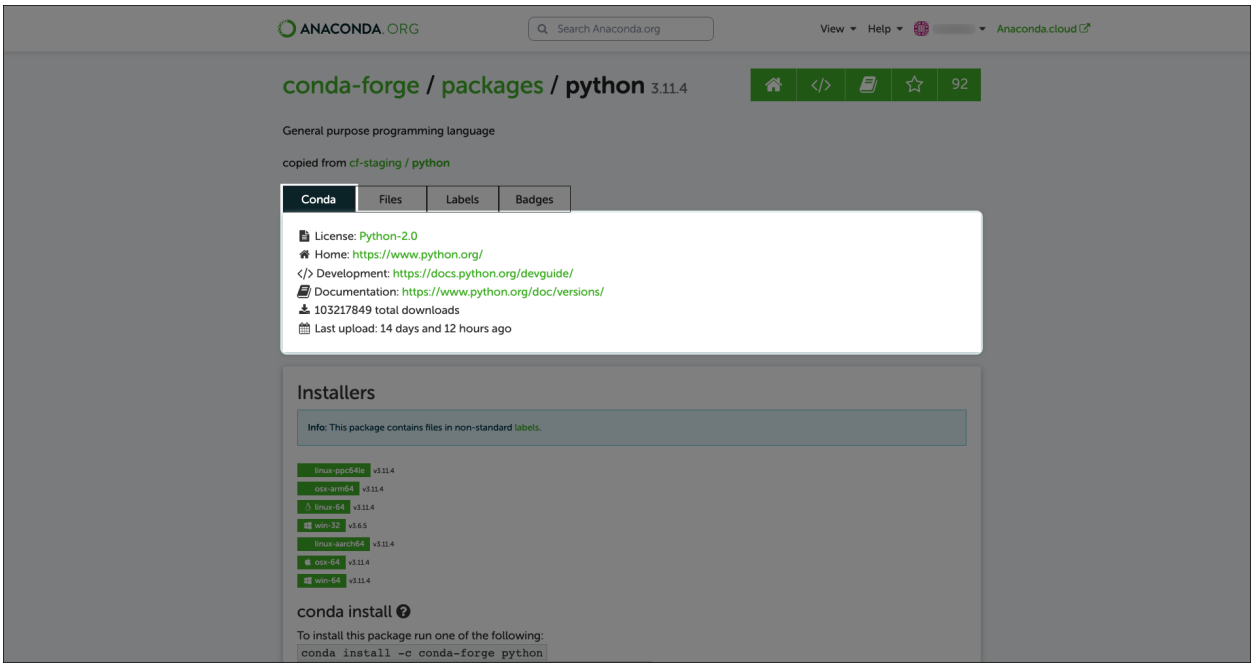
- `Type`: All, conda only, standard Python only, or standard R only
- `Access`: All, Public, Private (only available if you are logged in and have specific permissions), or Authenticated (only available if you are logged in)
- `Platform`: All, source, linux-32, linux-64, linux-aarch64, linux-armv61, linux-armv71, linux-ppc641e, linux-s390x, noarch, osx-32, osx-64, win-32, or win-64

Tip: `Source` packages are source code only, not yet built for any specific platform.

`Noarch` packages are built to work on all platforms.

Viewing package information

Each official package page on Anaconda.org provides valuable information about the package, such as its version, license, home webpage, documentation (if available), number of downloads, and the last time the package was updated.



You can also find commands on this page to assist you with installing the package in your environment.

Tip: If the Installer section lists multiple install commands and you're unsure about which one to use, the command without *labels* (most often the first on the list) is likely to be the default package.

Installing packages from Anaconda.org

You can install packages using *Anaconda Navigator*, Anaconda's graphical user interface that is built on top of conda. Advanced users may prefer using Anaconda Prompt (Terminal on macOS/Linux).

Using Navigator

Navigator is automatically installed when you install Anaconda. Miniconda users can obtain Navigator by running `conda install anaconda-navigator`.

To install a package into its own environment:

1. Open Anaconda Navigator.
2. Click **Connect**, then click **SIGN IN** beside Anaconda.org.
3. Select **Environments** from the left-hand navigation, then look for your package by name using the **Search Packages** field. Filter packages further using the dropdown above the **Name** column.
4. Select the checkbox of the package you want to install, then click the **Apply**.

For more information, see *Navigator*.

Using conda in Anaconda Prompt (Terminal on macOS/Linux)

Note: You must have conda downloaded and installed to use this method of installation.

To install a package into its own environment:

1. Locate a package on Anaconda.org that you want to install, then click on the package name.
2. A detail page displays specific installation instructions for the current operating system. Copy and paste the full command into your terminal window.

For example, the command could be structured as:

```
# Replace <USERNAME> with your username
# Replace <PACKAGE> with the name of the package you want to install
conda install --channel <USERNAME> <PACKAGE>
```

Tip: With no channel_alias defined in `.condarc`, the channel prefix defaults to https://conda.anaconda.org/. To learn more about channel aliases and how to set them, see this section on setting a channel alias.

Uploading and installing conda packages

To work with conda packages, you must use the corresponding subdomain `https://conda.anaconda.org`. To install conda packages from the user `travis`, for example, use the repository URL `https://conda.anaconda.org/travis`.

Uploading conda packages

This example shows how to build and upload a conda package to Anaconda.org using `conda build`.

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. If necessary, install the `anaconda-client` and `conda-build` packages by running the following command:

   ```
   conda install anaconda-client conda-build
   ```

3. Choose the repository for which you would like to build the package. In this example, we use a small public conda test package:

   ```
   # Replace <PACKAGE> with the package name
   git clone https://github.com/Anaconda-Platform/anaconda-client
   cd anaconda-client/<PACKAGE>/conda/
   ```

   In this directory, there are two required files, meta.yaml and build.sh.

   macOS and Linux systems are Unix systems. Packages built for Unix systems require a `build.sh` file, packages built for Windows require a `bld.bat` file, and packages built for both Windows and Unix systems require both a `build.sh` file and a `bld.bat` file. All packages require a `meta.yaml` file.

4. To build the package, turn off automatic Client uploading and then run the `conda build` command:

```
conda config --set anaconda_upload no
conda build .
```

All packages built in this way are placed in a subdirectory of the *Anaconda* `conda-bld` directory.

Tip: You can check where the resulting file was placed by adding the `--output` option:

```
conda build . --output
```

---

5. Upload the test package to Anaconda.org by running the `anaconda upload` command:

```
anaconda login

# Replace </PATH/TO/PACKAGE_NAME> with the correct file path and package name
# Packages can be uploaded with .tar.bz2 or .conda compression formats
anaconda upload </PATH/TO/PACKAGE_NAME>.tar.bz2
anaconda upload </PATH/TO/PACKAGE_NAME>.conda
```

For more information on the `.conda` format, see *Using the .conda compression format*.

For more information on conda's overall build framework, check out our article on Building conda packages.

Installing conda packages

You can install conda packages from Anaconda.org by adding channels to your conda configuration.

Public channels

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Because conda knows how to interact with Anaconda.org, specifying the channel `sean`, for example, translates to https://anaconda.org/sean:

```
conda config --add channels sean
```

3. You can now install public conda packages from Sean's Anaconda.org account. Try installing the `testci` package at https://anaconda.org/sean/testci:

```
conda install testci
```

Private channels

You can install a package from a private channel with a token and a *Label*:

```
# Replace <TOKEN> with the provided token
# Replace <CHANNEL> with a user channel
# Replace <LABEL_NAME> with the label name
# Replace <PACKAGE> with the name of the package you want to install
conda install --channel https://conda.anaconda.org/t/<TOKEN>/<CHANNEL>/label/<LABEL_NAME>
↪ <PACKAGE>
```

Tokens are only required if the channel is private.

Finding help for uploading packages

You can obtain a complete list of upload options, including:

- Package channel.
- Label.
- Availability to other users.
- Metadata.

To list the options, run the following in Anaconda Prompt (Terminal on macOS/Linux):

```
anaconda upload -h
```

Uploading and installing standard Python packages

To work with standard Python packages, you must use the corresponding subdomain `https://pypi.anaconda.org`. To install standard Python packages from the user `travis`, for example, use the repository URL `https://pypi.anaconda.org/travis`.

Uploading standard Python packages

We can test standard Python package uploading with a small public example package saved in the anaconda-client repository.

Use Anaconda Prompt (Terminal on macOS/Linux) to perform the following steps:

1. Begin by cloning the repository from the command line:

   ```
   # Replace <PACKAGE> with the package name
   git clone git@github.com:Anaconda-Platform/anaconda-client.git
   cd anaconda-client/<PACKAGE>/pypi/
   ```

2. You can now create your standard Python package with the `setup.py` script:

   ```
   python setup.py sdist
   ```

3. The package has now been built as a source tarball and is ready to be uploaded:

   ```
   anaconda upload dist/*.tar.gz
   ```

   Your package is now available at `http://anaconda.org/<USERNAME>/<PACKAGE>`, where `<USERNAME>` is your username and `<PACKAGE>` is the package name.

Installing standard Python packages

The best way to install a standard Python package is using `pip`. For the following command, we use the package we authored in the examples above. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <USERNAME> with your username
pip install --extra-index-url https://pypi.anaconda.org/<USERNAME>/simple pypi-test-
↪package
```

Installing private standard Python packages

The best way to manage access or make standard Python packages and other packages private is to create *organizations* or *groups*, which allow you to set separate permissions per package.

You can also control access with the token system. All Anaconda.org URLs can be appended with `/t/$TOKEN` to access private packages.

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
# Replace <TOKEN_NAME> with the name of the token you created
# Replace <USERNAME> with your username
# Replace <SIMPLE_TEST_PACKAGE> with the actual test-package name
TOKEN=$(anaconda auth --create --name <TOKEN_NAME>)
pip install --index-url https://pypi.anaconda.org/t/$TOKEN/<USERNAME>/<SIMPLE_TEST_
↪PACKAGE>
```

Working with standard Python wheel files

When Anaconda Client uploads a wheel file, it uses the standard Python compliant package name format. This replaces any underscores (_) and periods (.) with dashes (-). If you need to add a wheel file to an already-existing conda package and that package name contains underscores or periods, specify the package name with the `--package` or `-p` flag.

```
# Replace <PACKAGE> with the package name
# Replace </PATH/TO/WHEEL_FILE> with the wheel file and the file path
anaconda upload --package <PACKAGE> </PATH/TO/WHEEL_FILE>
```

Finding help for uploading packages

You can obtain a complete list of upload options, including:

- Package channel.
- Label.
- Availability to other users.
- Metadata.

To list the options, run the following in Anaconda Prompt (Terminal on macOS/Linux):

```
anaconda upload -h
```

Private packages

Note: Individual paid plans with private packages are a legacy offering from Anaconda.org that are no longer available. However, anyone who had private packages in the past still has the ability to have those hosted privately.

Making packages private

By default, all packages uploaded to Anaconda.org are accessible to anyone who has access to the repository.

Note: As of August 30, 2023, only users with paid plans can mark their packages as private.

To mark packages uploaded to your user channel on Anaconda.org as private:

1. Select the desired package.
2. Navigate to the **Settings** tab.
3. Select **Admin** in the sidebar.
4. Select **Private**.

Note: Other Anaconda.org users may access your private packages either with tokens or by logging in.

Accessing private packages with tokens

A token is a random alphanumeric string that is used to restrict and provide access to packages on a channel.

To make your private packages accessible with tokens, create an access *token* that includes the following scope for Anaconda Client:

```
conda:download
```

Or, make the adjustment on anaconda.org: In the access settings, select **Allow private downloads from conda repositories**.

Using the token to access private packages

If you intend to install many packages from a private channel, you can include the channel in your `.condarc` file. This will include the token any time you search for packages on that channel. To add a user channel to your `.condarc` file from Anaconda Prompt (Terminal on macOS/Linux), run the following command:

```
# Replace <TOKEN> with the provided token
# Replace <CHANNEL> with a user channel
conda config --add channels https://conda.anaconda.org/t/<TOKEN>/<CHANNEL>
```

You can also use the token to install packages without first adding the channel to your `.condarc` file by using the channel's full URL. In Anaconda Prompt (Terminal on macOS/Linux), run the following command:

```
# Replace <TOKEN> with the provided token
# Replace <CHANNEL> with a user channel
# Replace <PACKAGE> with the name of the package you want to install
conda install --channel https://conda.anaconda.org/t/<TOKEN>/<CHANNEL> <PACKAGE>
```

Accessing a private package that has a label

To install a package from a channel using the token and label name:

```
# Replace <TOKEN> with the provided token
# Replace <CHANNEL> with a user channel
# Replace <LABEL_NAME> with the label name
# Replace <PACKAGE> with the name of the package you want to install
conda install --channel https://conda.anaconda.org/t/<TOKEN>/<CHANNEL>/label/<LABEL_NAME>
↪ <PACKAGE>
```

Using the token to access private PyPI packages

1. Private PyPI packages can also be installed in the web UI:

   ```
   # Replace <TOKEN> with the provided token
   # Replace <CHANNEL> with a user channel
   https://pypi.anaconda.org/t/<TOKEN>/<CHANNEL>
   ```

Accessing private packages as a registered user

To make your private packages available to users who have logged in:

1. Create an *organization*.
2. Create a group (which can be read-only) in that organization.
3. Add the desired users to the group.
4. Upload the package to the organization, or transfer an existing package to the organization.

After you grant users access, other users can install your package using the web UI or Anaconda Client.

To install a package:

1. In a browser, navigate to the desired channel.
2. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

   ```
   # Replace <ORGANIZATION> with the organization name
   # Replace <PACKAGE> with the package name
   conda install anaconda-client
   anaconda login
   conda install --channel https://conda.anaconda.org/<ORGANIZATION> <PACKAGE>
   ```

Manage your hosted packages

Adding a collaborator to a package

You can add other users that are not part of an organization to collaborate on your packages.

1. From your dashboard, select the package.
2. To display the package settings, select the **Settings** option.
3. To display the current collaborators, select the **Collaborators** option.
4. Enter the username of the person you want to add as a collaborator, then click **Add**.

Note: All collaborators are given full read/write permissions to the package, *even for private packages*.

Removing a collaborator from a package

To revoke package access previously granted to a collaborator:

1. From your dashboard, select the package.
2. To display the package settings, select the **Settings** option.
3. To display the current collaborators, select the **Collaborators** option.
4. Click the red **X** beside a collaborator to revoke their access.

Transferring a package to a new owner

By default, when you create or add packages, they are attached to your individual profile. You can transfer ownership to another owner account you control, such as an organization profile you manage.

To transfer a package to a new owner:

1. From your dashboard—or the dashboard of an organization you administer—select the package for which you want to transfer ownership. The system displays options for that package.
2. To display the package settings, select the **Settings** option.
3. Select the **Admin** option.
4. Under **Transfer this package to a new owner**, click **Transfer**.
5. Select the organization name for the new owner.
6. Click **Transfer Ownership**.

Copying a package

The following command is an example of how to copy a package from the `conda-forge` channel to a personal channel called `jsmith`:

```
anaconda copy conda-forge/glueviz/0.10.4 --to-owner jsmith
```

`conda-forge/glueviz/0.10.4` is a "spec" that can be formatted in one of two ways: `user/package/version` or `user/package/version/filename`.

Caution: The `anaconda copy` commands `from-channel` and `to-channel` have been deprecated. If you attempt to run `anaconda copy --from-channel conda-forge --to-channel jsmith glueviz`, you will receive an error that `Label conda-forge does not exist`.

Caution: If the package `glueviz/0.10.4` already exists for user `jsmith`, you will receive the following error message: `File conflict while copying!`. If you want to copy the package anyway, try prepending the command with one of the following flags:

- `--replace` - allows you to overwrite an already existing package
- `--update` - allows you to add missing metadata to an existing package

Removing a previous version of a package

To remove a previous version of one of your packages from Anaconda.org:

1. Select the package name.
2. Navigate to the **Files** tab.
3. Select the checkbox to the left of the version you want to remove.
4. In the **Actions** menu, select **Remove**.

To remove a previous version of one of your packages using Anaconda Prompt (Terminal on macOS/Linux), run:

```
# Replace <USERNAME> with your username
# Replace <PACKAGE> with the package name
# Replace <VERSION_NUMBER> with the desired version
anaconda remove <USERNAME>/<PACKAGE>/<VERSION_NUMBER>
```

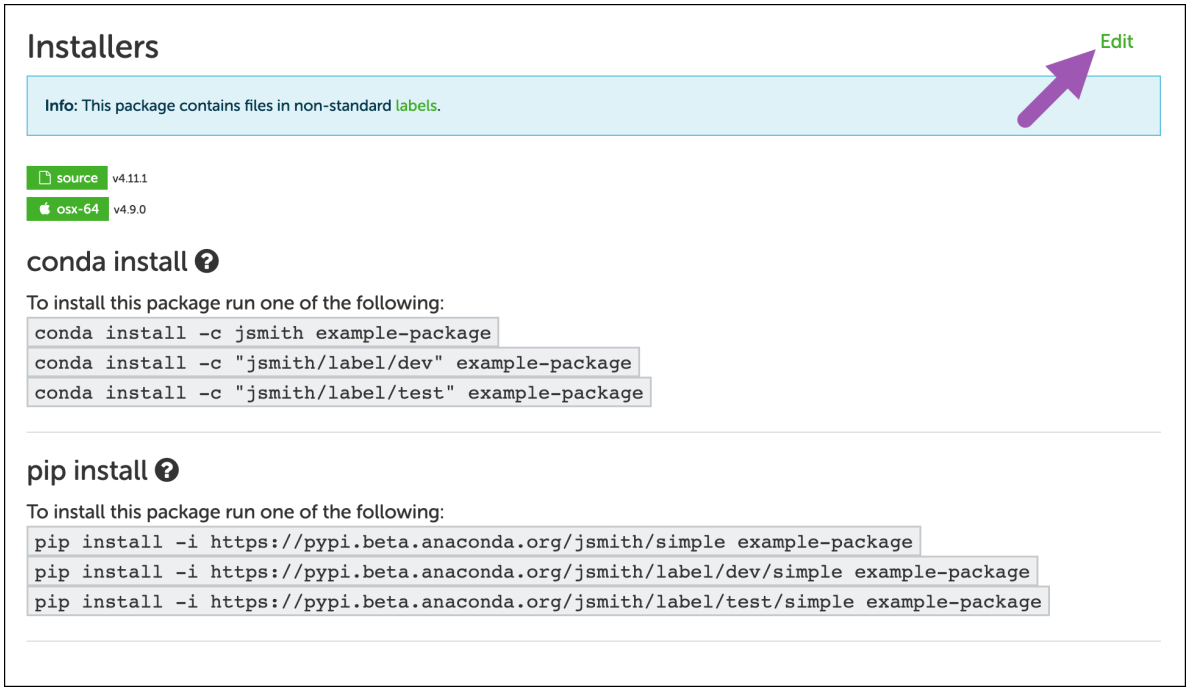
You can now see the change on your profile page at `http://anaconda.org/<USERNAME>/<PACKAGE>`, where `<USERNAME>` is your username and `<PACKAGE>` is the package name.

Hiding package install instructions

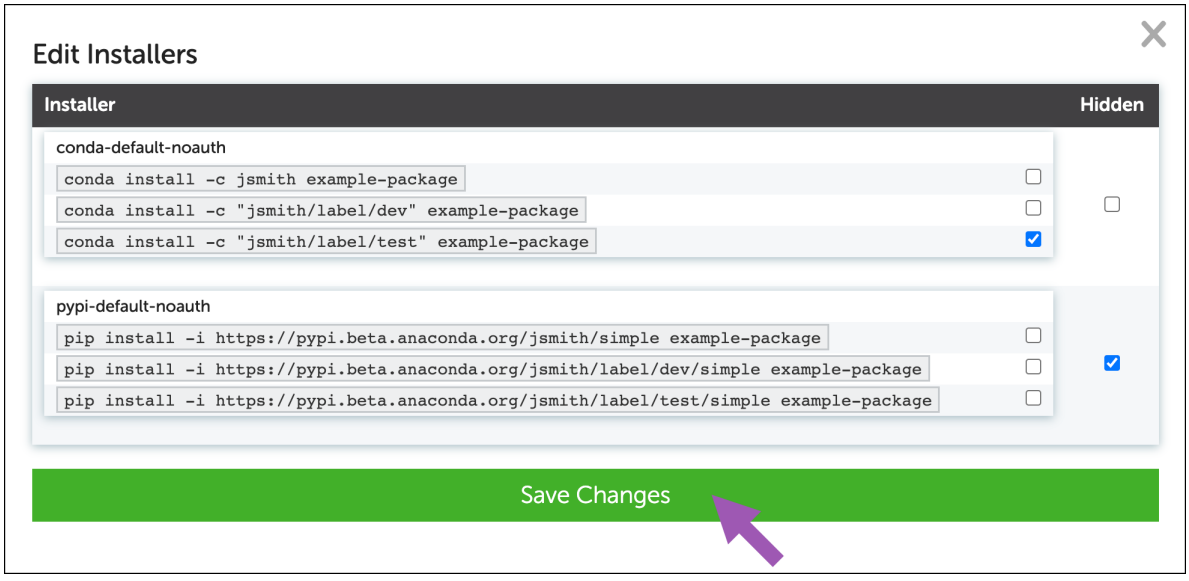
After you have uploaded packages to an account or organization, you can control what install instructions appear on your package's download page. Install instructions will vary depending on the package's labels or package type (conda or standard Python).

To edit the visibility of your package install instructions:

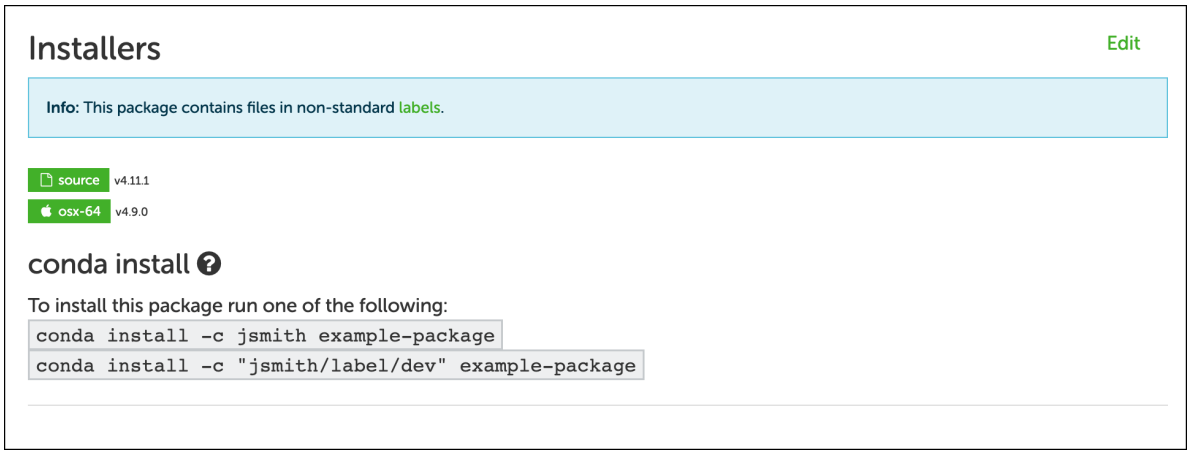
1. Click **Edit**.



2. Select the checkboxes for the instructions you want to hide. You can also select the checkbox on the far right of any group to hide all instructions.



3. Click **Save Changes**.



Deleting a package

To delete a package and all of its versions from Anaconda.org:

1. Select the package name.
2. Select the **Settings** option.
3. Select the **Admin** option.
4. Click **Delete**.

To delete a package and all of its versions using Anaconda Prompt (Terminal on macOS/Linux), run:

```
# Replace <USERNAME> with your username
# Replace <PACKAGE> with the package name
anaconda remove <USERNAME>/<PACKAGE>
```

You can now see the change on your profile page at `http://anaconda.org/<USERNAME>`, where `<USERNAME>` is your username.

Updating package metadata

Much of the metadata provided in your package's *meta.yaml* file appears on your package's download page. This is information like your package's license, description, Git repository URL, and documentation URLs. For more information on what is usually contained in conda-build's *meta.yaml* file, see the conda-build documentation.

Anaconda Client automatically updates metadata defined in the *meta.yaml* file of your package upload, *as long as the package version number has never been uploaded previously*. To update your metadata without needing a new package version, use `--force-metadata-update`.

```
anaconda upload /your/path/conda-package.tar.bz2 --force-metadata-update
```

Using the .conda compression format

Currently, when you use `conda build` to create packages, those packages are compressed into a `.tar.bz2` format. This format has been used since the inception of conda and has become very slow when compared to modern compression formats. With that in mind, the `.conda` compression format was created. See Conda packages and the *Downloading and Extracting Packages* section of the Understanding and Improving Conda's Performance blog post for more detailed information on `.conda`.

The most important thing to understand about the `.conda` format is that it allows much faster access to packages' metadata by compressing that metadata into its own tarball file separate from the rest of the package contents.

To see how the `.conda` format vastly improves the speed of package extraction, try the following:

```
#Install the conda-package-handling package
conda install conda-package-handling

#Transmute a .tar.bz2 package format into a .conda format
#cph transmute IN_FILE(file to convert) OUT_EXT(extension to convert to, i.e. .conda)
cph transmute mkl-2018.0.3-1.tar.bz2 .conda

#Test the speed of extracting the .tar.bz2 file versus the .conda file
$ time cph extract mkl-2018.0.3-1.tar.bz2 --dest mkl-a
cph extract mkl-2018.0.3-1.tar.bz2 --dest mkl-a  18.16s user 0.59s system 98% cpu 19.015␣
↪total
$ time cph extract mkl-2018.0.3-1.conda --dest mkl-b
cph extract mkl-2018.0.3-1.conda --dest mkl-b  1.41s user 0.65s system 87% cpu 2.365␣
↪total
```

As you can see the `.conda` file is extracted nearly an order of magnitude more quickly than the `.tar.bz2` file.

`.conda` files can be uploaded to Anaconda.org using `anaconda upload`, just like any `.tar.bz2` file. The current workflow for creating `.conda` packages is to build them using `conda build`, then transmute the `.tar.bz2` files into `.conda` files using `cph transmute`, and then upload them normally as described in the *uploading conda packages* section.

Labels

Organize your code and facilitate the development cycle—without affecting non-development users—by applying Anaconda.org *labels* to code that is in development, in testing, and in production. Using Anaconda Client, *Package* developers can create labels like `labels/dev` for development, `labels/test` for testing, or other labels that are found only if the user specifies the label in their search.

The following search examples use a *Namespace* of `travis`:

https://anaconda.org/travis/labels/main	Label searched by default
https://anaconda.org/travis	Same as default label with `main` implicit
https://anaconda.org/travis/labels/dev	Contains the packages in development
https://anaconda.org/travis/labels/test	Contains the packages ready to test
https://anaconda.org/travis/labels/any-custom-label	Any label you want to use

Using labels to make your packages private

The following steps instruct you in the use of a `test` label, which allows you to upload files without affecting your production-quality packages. Without a `--label` option, the label defaults to `main`.

Use Anaconda Prompt (Terminal on macOS/Linux) to perform the following steps:

Building and uploading the package

1. Start with a conda package. In this example, we use a small public conda test package:

```
git clone https://github.com/Anaconda-Platform/anaconda-client/
cd anaconda-client/example-packages/conda/
```

2. Open the `meta.yaml` file by running the following command:

```
nano meta.yaml
```

3. Change the version number to `2.0`. To save and close the `meta.yaml` file, press Ctrl+X, followed by Y.

4. To build the package, turn off automatic Client uploading and then run the `conda build` command:

```
conda config --set anaconda_upload no
conda build .
```

Tip: You can check where the resulting file was placed by adding the `--output` option:

```
conda build . --output
```

---

5. Upload your test package to Anaconda.org using the Anaconda Client upload command.

   Add the `--label` option followed by your label (in this case, `test`), which tells Anaconda.org to make the upload visible only to users who specify that label:

```
# Replace </PATH/TO/PACKAGE_NAME> with the correct file path and package name
anaconda upload </PATH/TO/PACKAGE_NAME>.tar.bz2 --label test
```

Now you can see that even when you search conda `main`, you do not see the `2.0` version of the test package. This is because you need to tell conda to look for your new `test` label.

Testing the discoverability of the package

1. Add the `--override` argument, which tells conda not to use any channels in your `~/.condarc` file. Without specifying the label and package name, the `2.0` version is not discoverable:

```
# Replace <USERNAME> with your username
conda search --override --channel <USERNAME> conda-package
```

   Once the label and package are specified, the `2.0` can be found:

```
# Replace <USERNAME> with your username
conda search --override --channel <USERNAME>/label/test conda-package
```

2. You can give the label <USERNAME>/label/test to your testers, where <USERNAME> is your username.
3. Once they finish testing, you may then want to copy the test packages back to your main label:

```
anaconda label --copy test main
```

You can also manage your package labels from your dashboard at https://anaconda.org/USERNAME/conda-package, where <USERNAME> is your username.

Your version 2.0 is now in main:

```
# Replace <USERNAME> with your username
conda search --override --channel <USERNAME> conda-package
```

If you use anaconda-client 1.7 or higher, you can use anaconda move to move packages from one label to another:

```
# Replace <OLD> with the old label
# Replace <NEW> with the new label
# Replace <SPEC> with the package to move. SPEC can be either "user/package/version/file
↪" or "user/package/version", in which case it moves all files in that version.
anaconda move --from-label <OLD> --to-label <NEW> <SPEC>
```

FAQs

What is Anaconda.org?

Anaconda.org is a package management service by Anaconda. For more information, see *Anaconda.org*.

What kind of packages does Anaconda.org support?

Anaconda.org supports any type of package. Today, it is primarily used for conda and standard Python packages, as well as notebooks and environments. Both tar.bz2 and .conda compression files can be uploaded to Anaconda.org. See *Using the .conda compression format* for more information on the .conda format.

Who can find and install my packages?

If you have a free account, all of your packages are public. After you upload them to Anaconda.org, anyone can search for and download them.

What is Anaconda, Inc.?

Anaconda is a software development and consulting company of passionate open source advocates based in Austin, Texas, USA. We are committed to the open source community. We created the Anaconda Python distribution and contribute to many other open source-based data analytics tools. You can find out more about us by reading our story.

What are Anaconda.org's Terms of Service?

Our Terms of Service are available on our website. For any additional questions, contact us by email.

How much does Anaconda.org cost?

Anaconda.org is free for downloading and uploading public packages.

How do I get started with Anaconda.org?

You can search, download and install hundreds of public packages without having an account. If you want to upload packages, you need to sign up for a Anaconda.org account. For more information, see *sign up for a free Anaconda.org account*.

What kind of account do I have?

By default your account is a personal, free account. All packages you upload to Anaconda.org are public, and you are the only person with administrative access to your account.

What is included in the free version of Anaconda.org?

The free plan allows you to search for, create and host public packages, and provides up to 3 GB storage space.

What is an organization account, and how is it different from an individual account?

An organization account allows multiple individual users to administer packages and have more control of package access by other users. An individual account is for use by one person.

Command Reference

`anaconda-client` is the command line interface (CLI) for Anaconda.org, and can be used for logging in, logging out, managing your account, uploading files, generating access tokens, viewing tokens, and more!

To view the `anaconda-client` command reference, open a terminal and use the following command:

```
anaconda -h
```

This displays the command reference for the base `anaconda` command.

To display the command reference for other `anaconda` commands, such as `login`, `search`, `upload`, etc., use the following command:

```
# Replace <COMMAND> with the command you want help with
anaconda <COMMAND> -h
```

For example, if you want the command reference for `anaconda search`, use the following command:

```
anaconda search --help
```

Release notes

This page contains release notes for *Anaconda.org* and *Anaconda Client*, the command line interface (CLI) tool used to add packages to Anaconda.org.

Anaconda.org

4.0.6 - 2024-11-19

- Loading times are now faster for profile and group pages.
- Continued internal and developer experience updates.

4.0.5 - 2024-10-28

- Search is substring-based again instead of keyword-based. This means that searches that aren't exact will still find packages that contain the text searched for.

4.0.4 - 2024-10-14

- Search is now keyword-based instead of substring-based.
- Removed unnecessary environment data from **Settings > Security log**.
- Fixed issue where users who were not logged in to Anaconda.org could see private or authenticated packages in search results.

4.0.3 - 2024-10-03

- Continued security improvements.
- Improvements to user logout mechanism.

4.0.2 - 2024-09-17

- Anaconda.org now logs users out of the web interface after one hour.
- Updated backend database to MongoDB v7, which improves the speed and security of database queries.
- Adjusted password validation.
- Improved security.

4.0.1 - 2024-09-03

- **Continued removal of the Notebooks and Environment features:**
  - Excluded `.yaml` files from search results.
  - Disabled access to Environment and Notebook features from the Labels tab and Activity Feed.
  - Removed the ability to upload environments/notebooks via the `anaconda-client` command line tool.
- Significantly improved backend CPU usage and database queries, which greatly improves site stability.
- Fixed a bug that caused users with more than 40 favorites to receive a 500 error when trying to view their favorites.
- Fixed bugs impacting the Forgot Username and Forgot Password dialogs.
- Fixed a bug preventing the "Looks like <USER/ORG> has nothing to share" pane from appearing for newly created users and organizations.

4.0.0 - 2024-08-20

- Removed Projects, Notebooks, and Environment features. This feature removal is part of an initiative to streamline and improve Anaconda.org and enable the site to focus on package hosting and management.

  Note: This change only affects storing and working with projects, environments and notebooks specifically on Anaconda.org. You can still work with projects, environments, and notebooks outside of Anaconda.org.

- Updated and streamlined bug reporting mechanism on support.anaconda.com.
- Continued internal and developer experience updates.

3.0.12 - 2024-08-05

- Fixed a bug where the email field in the Forgot Username dialog allowed incorrect email formats.
- Fixed a bug where the username field in the Forgot Password dialog allowed blank entries.

3.0.11 - 2024-07-30

- Updated the look of page titles in Google Search results.
- Continued internal and developer experience updates.

3.0.10 - 2024-07-16

- Changed the default number of search responses per page from 100 to 25 to better optimize Anaconda.org.
- Continued internal and developer experience updates.

3.0.9 - 2024-07-02

- Added a link to the migration instructions in the deprecation announcement banner.
- Continued internal and developer experience updates.

3.0.8 - 2024-06-18

- Added banner to site announcing future deprecation of Projects, Notebooks, and Environments. Documentation on exporting your projects, notebooks, and environments will be added and linked to the banner in the next release.
- Continued internal and developer experience updates.

3.0.7 - 2024-06-05

- Continued internal and developer experience updates.

3.0.6 - 2024-05-14

- Improved backend infrastructure.
- Improved backend developer experience.
- Updated link to Terms of Service in login dialog.

3.0.3 - 2024-01-03

- Install instructions now use the `conda install <channel>::<package>` format instead of the `conda install --channel <channel> <package>` format.
- In "I forgot my Username" form, added error message that prompts users to add an email address if they fail to do so.
- External links in Project pages now open in new tabs.
- Package release records in some API responses now no longer appear if all package files for that release are removed from Anaconda.org.
- Fixed user interface issues caused by very long artifact file names in Storage.
- Fixed missing search suggestions in groups.
- Artifact count in groups now updates properly.
- Fixed issue where multiple warnings appeared when setting an invalid package label.

3.0.1 - 2023-11-15

- Fixed some incorrect links for pip install instructions that were causing 500 (invalid server) errors.

3.0.0 - 2023-11-10

- Infrastructure update for better scaling and performance.

Note: These changes should not affect the API or user interface.

2.38.1 - 2023-09-26

- Updated documentation links.

2.38.0 - 2023-08-30

- Users can no longer upload packages named "projects", to avoid interfering with the redirect link to the projects detail page for packages.
- Email verification is now required for users' first login to Anaconda.org. Previously, users were automatically logged in after registering, but before verifying.
- Removed option to make packages private for users without a paid plan.
- Fixed missing or obsolete license information on package details page.

2.37.7 - 2023-08-01

- Added updates to Sign In page.
- Limited package file uploader information visibility to channel owner(s) and admin(s).
- Removed access to APIs without Anaconda.org email verification. This affects Anaconda.org, Anaconda Client, and Navigator.
- Fixed issue with resending verification email.
- Fixed issue with package types having `None` or `null` values.
- Fixed issue with password resets.
- Fixed issue with license URLs being set to `None`, causing the package license URLs to be incorrect.
- Fixed minor UI issues.

2.37.6 - 2023-05-31

- Added user data consent management for GDPR compliance.
- Added warning message if user exceeds 10GB storage limit.
- Renamed Anaconda Nucleus to Anaconda Cloud.
- Changed "packages" to "artifacts" in storage list, as packages, notebooks, environments, and projects can all be stored.
- Updated email verification and forgot username/password emails.
- Fixed issue with adding emails to account.
- Fixed issue where Revision tab didn't properly load large projects.
- Fixed issue where projects were missing in storage.
- Fixed issue with deleting files.
- Fixed minor UI issues.

2.37.5 - 2023-03-09

- Fixed issue where the name attribute was incorrectly including the platform (e.g. `linux-64`) in the repodata.json.

2.37.4 - 2023-03-06

- Added breadcrumbs to install instructions and Files and History tabs.
- Administrators can now remove broken organizations.
- Fixed issue where creating a user/organization could sometimes fail with partial data loss.
- Fixed minor UI issues.

2.37.3 - 2022-12-12

- Updated organization and username length limit to 50 characters.
- Added additional information to error messages for invalid organization names or usernames.
- Package descriptions can now only be updated by users with write permissions for those packages.
- Users can now scroll the full list of the API `/search` endpoint results, if over 100 packages.
- Fixed minor UI issues.

2.37.2 - 2022-10-17

- Added option to hide installation instructions on package homepages.
- Users can now search for environments as well using anaconda.org search page.
- Fixed issue where `.conda` packages were not being downloaded with the `.conda` file extension.
- Fixed the sorting of environments on the organization/user environments page.
- Fixed issue where a success notification was triggered when removing a label that didn't exist.
- Minor visual fixes on project revision dialog.

2.37.1 - 2022-10-17

- Added SHA256 checksums to packages on server side.

2.37.0 - 2022-09-07

- Added SHA256 checksums to packages on client side.
- Minor performance enhancements.

2.36.1 – 2022-06-09

- Added support for the `.conda` package format (requires anaconda-client 1.10.0 or later).
- Updated terminology for non-conda packages: "PyPI" packages are now called "standard Python" packages, and "CRAN" packages are now "standard R" packages.
- Resolved a bug that cleared the search field after results are returned.

2.35.6 – 2021-08-11

- Changed 'About us' link in the footer to point to https://www.anaconda.com/about-us.
- Changed platform filter to extend to linux-aarch64 and linux-s390x.
- Fixed duplicate files appearing on anaconda.org.
- Fixed versions sorting to show latest version on top of the list.
- Removed the project history page.
- Added PATCH operation to enable users to patch just the metadata for a package, without having to upload a new package.
- Updated password recovery page with a unified layout.

2.35.5 - 2021-02-25

- Update privacy-policy link in the notification bar.
- Fixed missing profile screen spacing.
- Fixed missing margin for multiple elements.

2.35.4 - 2021-02-09

- Changed design for index page.
- Fixed environment package uploading on UI with multiple package types.
- Removed listing of all anaconda objects using empty search query for users.

2.35.3 - 2021-01-27

- Updated Download Anaconda link, user-guide link and privacy policy link.
- Added utm_source query param to Nucleus links.
- Changed font on buttons to Museo Sans Rounded.
- Fixed issue where some package metadata wasn't being copied; implemented support of PUT and PATCH operations for package copying.

2.35.2 - 2021-01-11

- Updated Anaconda Cloud logos to Anaconda.org.
- Removed any mention of Anaconda Cloud.
- Updated Terms & Conditions/EULA link.
- Updated Anaconda link.
- Made changes to 'generate_ip_address_hash' method.
- Changed link to Anaconda Nucleus instead of Anaconda Enterprise.
- Added Anaconda Nucleus link in the footer.
- Changed font to Museo Sans Rounded.

2.35.1 - 2020-11-24

- Fixed CIBUILD anaconda-client install.

2.35.0 - 2020-11-24

- Updated Issue tracker link, documentation link, and removed email support.
- Updated links on Report a bug page.
- Updated links in footer.

2.33.27 - 2018-07-30

- Removed `/about/pricing` page.
- Allow the disabling of new Personal and Organization private accounts via Stripe API.

2.33.26 - 2018-07-19

- Captcha on organization creation.

2.33.25 - 2018-07-19

- Captcha on account creation.

2.33.24 - 2018-07-03

- Removed 'Pricing' links from header and footer.

anaconda-client

1.13.0 - 2024-10-30

- Anaconda has begun a migration to a plugin-based command line interface (CLI).
  - If users only have `anaconda-client` installed (the base package for the `anaconda` CLI, which available in all Anaconda Distribution installs), users should continue using `anaconda` commands, such as `anaconda login`, `anaconda upload`, etc.
  - If users have other plugins installed (like `anaconnda-cloud-auth`), all `anaconda` commands will now support an optional `org` prefix. For example, both `anaconda upload` and `anaconda org upload` will perform the same function.

  Note: Anaconda recommends that users with additional CLI plugins use the `anaconda org` command format going forward.

- The CLI help text for `anaconda` commands has been updated to reflect these command changes. To see the available help text, run the the following command:

```
anaconda --help
```

- The `anaconda notebooks` command has been deprecated, as notebooks are no longer hosted on Anaconda.org.

1.12.0 - 2023-07-18

- Package upload performance improvements.

1.11.3 - 2023-06-01

- Made changes to prevent the opening of redundant terminal windows.

1.11.2 - 2023-04-10

- Added option to force a package metadata update when uploading a package.
- Conda-safe package names (with underscores) can now be used for Python wheel files.
- Fixed upload of large package files.

1.11.1 - 2023-03-01

- `anaconda update` command now supports yaml files.

1.11.0 - 2022-09-08

- Upload process now generates sha256 package checksums.

1.10.0 - 2022-06-15

- Added support for `.conda` packages for upload and download.
- Changed labels for "pypi" and "r" to "standard Python" and "standard R".
- R packages should now download correctly.
- Issues related to the invalid configuration paths should now be mitigated.

1.9.0 - 2021-10-28

- Added `update` command.
- Fixed `upload` command for PyPI and conda packages of the same name.
- Fixed text error in "Distribution already exists" warning.

1.8.0 - 2021-06-25

- Added `--update` and `--replace` options for `copy` command.
- Fixed `--summary` and `--description` arguments for `upload` command.
- Fixed the usage of deprecated base64 functions.
- Fixed the downloading of multiple packages using the `download` command.

2.18.9 Anaconda Toolbox Excel Add-In

Python in Excel allows you to perform data manipulation, analysis, and visualization, as well as advanced machine learning and AI tasks, directly within Excel spreadsheets.

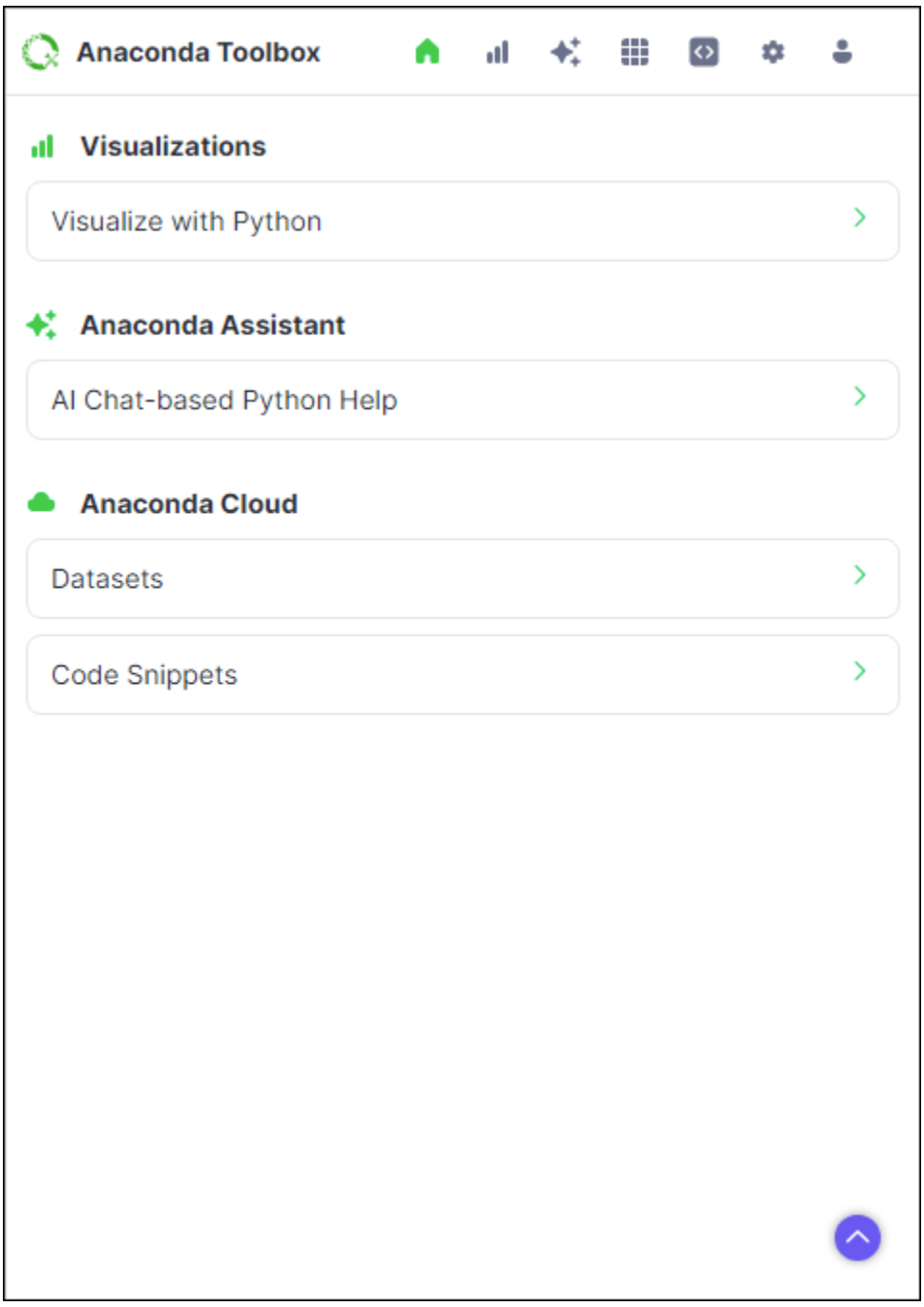
To make the most of your coding experience in Excel, Anaconda offers the following add-ins:

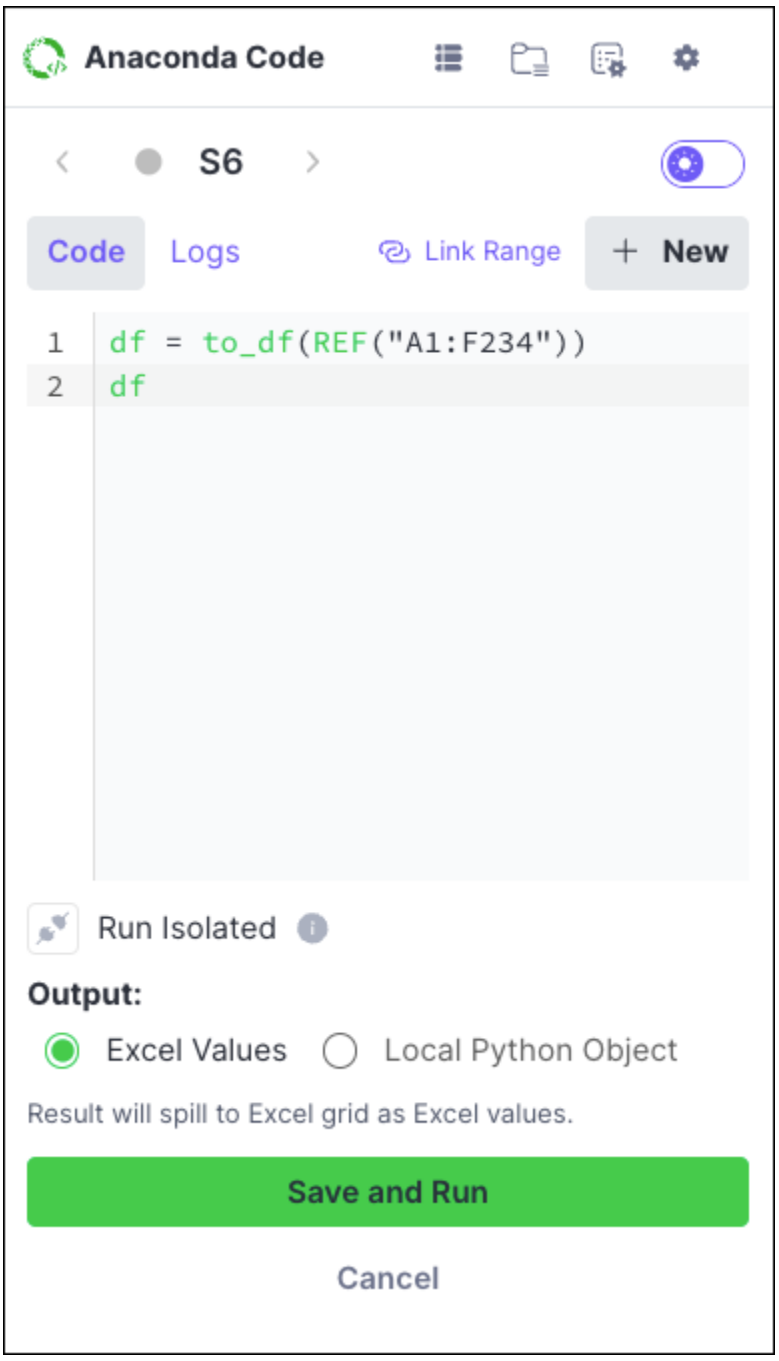
Anaconda Toolbox

Anaconda Toolbox is an Excel add-in that makes Python accessible from your spreadsheets, even if you're not an expert. Quickly generate, save, and share code across Excel and Notebooks, create visualizations, and get help from our Anaconda Assistant, learning Python as you go.

Anaconda Code

Anaconda Code empowers you to write Python code and run it locally, directly within Excel. This gives you flexibility and control over the Python environment in your workbook, allowing you to add and remove packages as needed, all while keeping code and data securely within your workbook.


Anaconda Toolbox
Visualizations
Visualize with Python
Anaconda Assistant
AI Chat-based Python Help
Anaconda Cloud
Datasets
Code Snippets


Anaconda Code
S6
Code
Logs
Link Range
New
1 df = to_df(REF("A1:F234"))
2 df
Run Isolated
Output:
Excel Values
Local Python Object
Result will spill to Excel grid as Excel values.
Save and Run
Cancel

Installation

The following sections detail the process for installing and opening Anaconda Toolbox in Excel. Once installed, get to know your newly added functionality through our *Anaconda Toolbox* and *Anaconda Code* documentation.

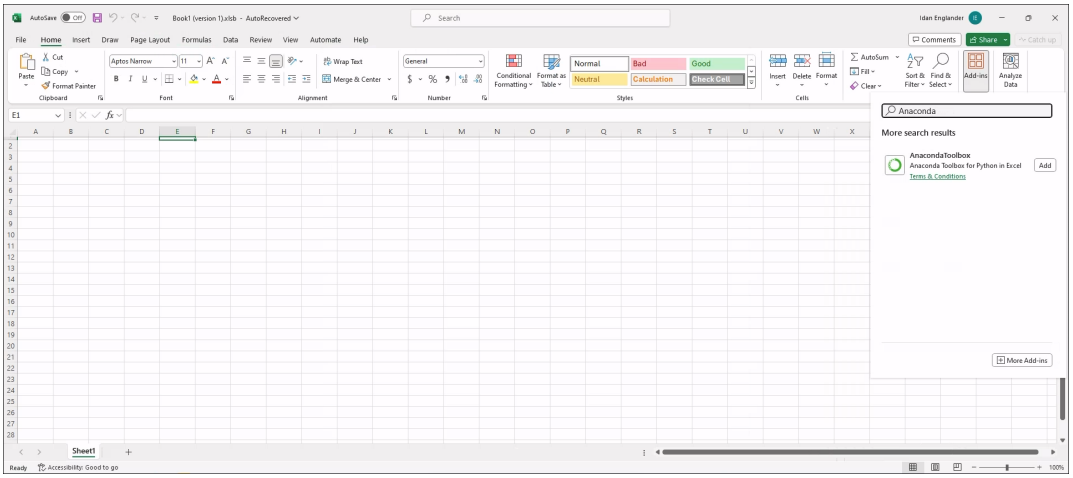
Note: *Anaconda Code* is included in the Anaconda Toolbox installation.

Installing Anaconda Toolbox

1. Go to the Anaconda Toolbox product page on Microsoft AppSource.
2. Click **Get it now**, then follow the onscreen instructions to open.
3. If necessary, close and reopen Excel for your changes to take effect.

Accessing Anaconda Toolbox

1. From the **Home** tab, click **Add-ins**, then search for *Anaconda*. You should see the **AnacondaToolbox** add-in.



Note: If **AnacondaToolbox** does not appear, click **More Add-ins** and search again in the dialog that appears.

---

2. Click **Add**.

You can now open the Anaconda Toolbox from the **Formulas** tab.

Anaconda Toolbox

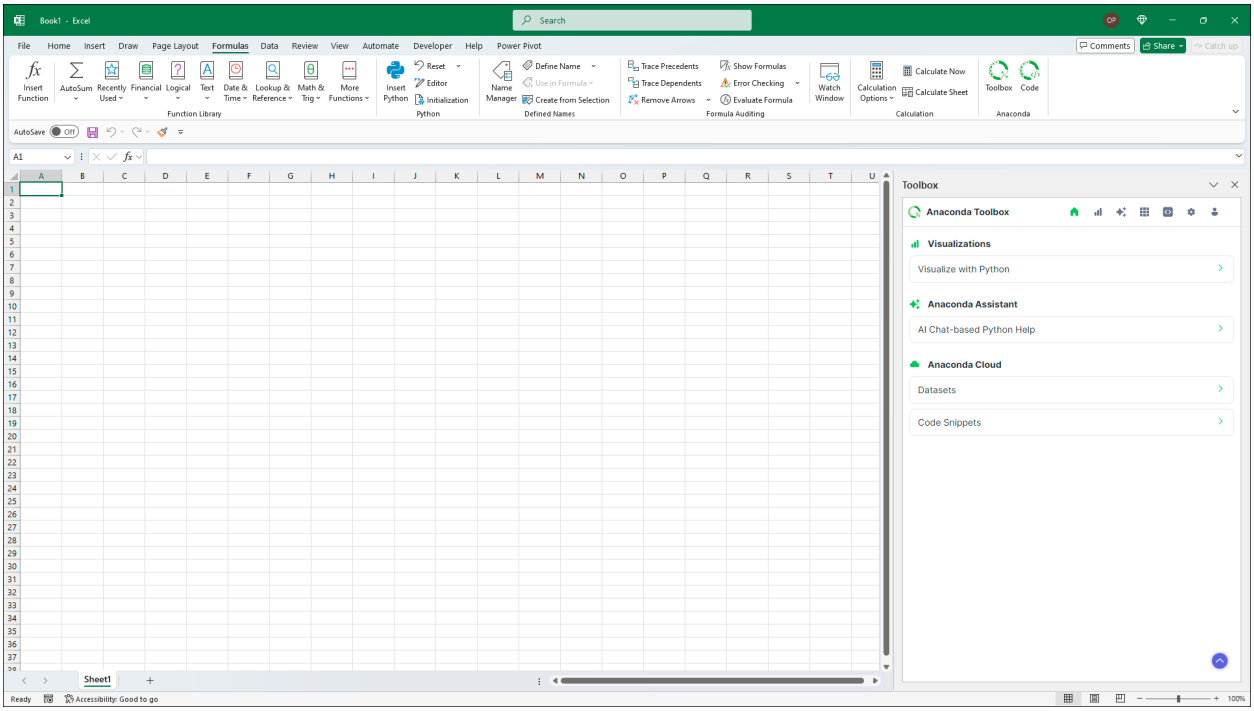
Unlock the power of Python in your spreadsheets - no coding skills needed

Anaconda Toolbox is an Excel add-in that makes Python accessible from your spreadsheets, even if you're not an expert. Quickly generate, save, and share code across Excel and Notebooks, create visualizations, and get help from our Anaconda Assistant, learning Python as you go.

Powered by Anaconda—the same team that provides the Python libraries for Microsoft's Python in Excel.

Once you've *installed Anaconda Toolbox*, you can:

- *Transform Tables into Visualizations*: See your data come to life through the power of charts.
- *Meet Anaconda Assistant*: Your AI-powered assistant for Python-centric tasks in Excel.
- *Sync Your Data Anywhere*: Start in one workbook, pick up in another—your data follows you when all your work is saved to Anaconda Cloud.
- *Run Code Again and Again*: Upload, share, and reuse your favorite snippets of code.



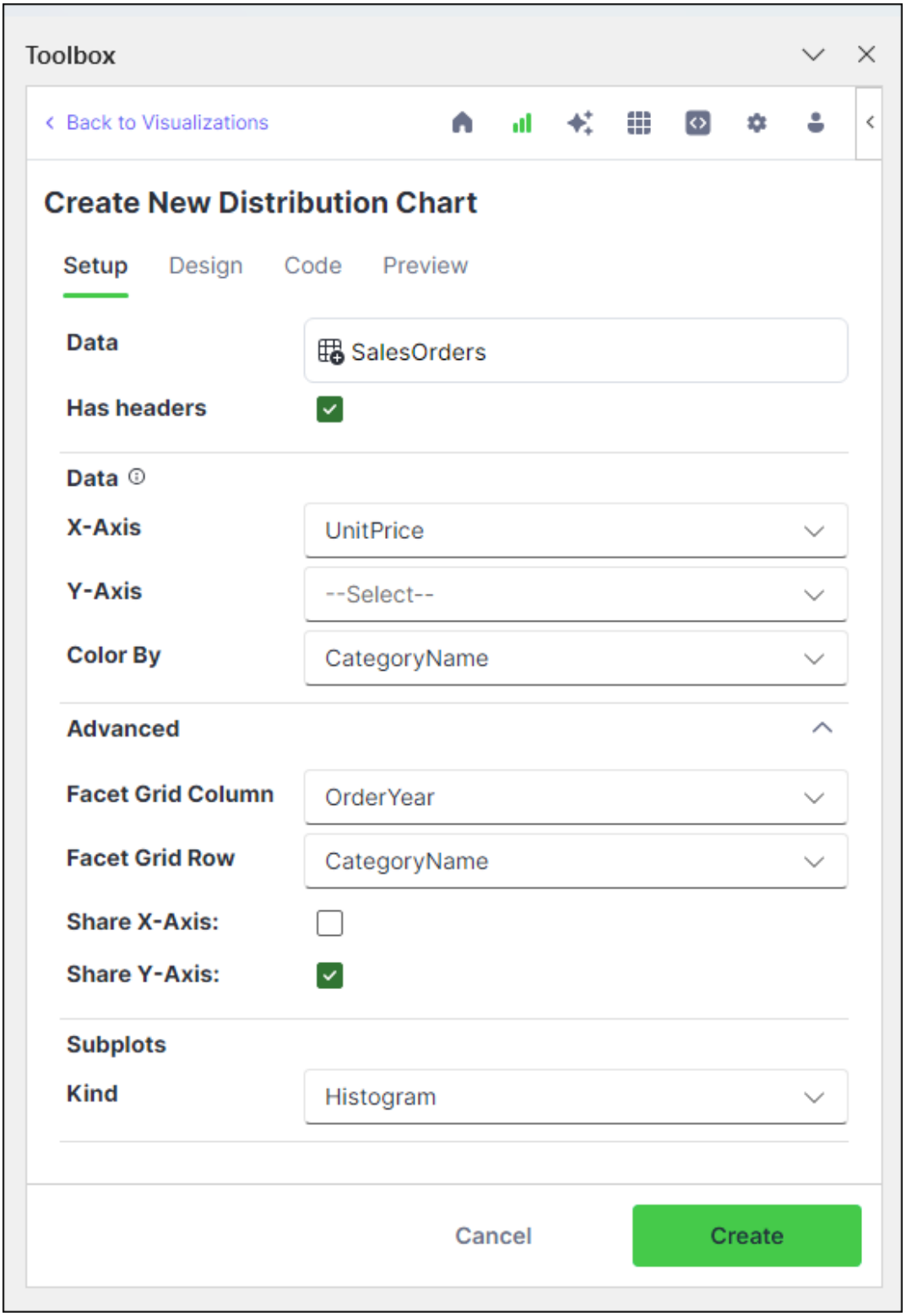
Visualize with Python

Visualizations allow you to transform entire data sheets or specific cell selections into charts to help you understand your data. Anaconda provides a variety of charts so you can present your data in a way that makes sense for your use case.

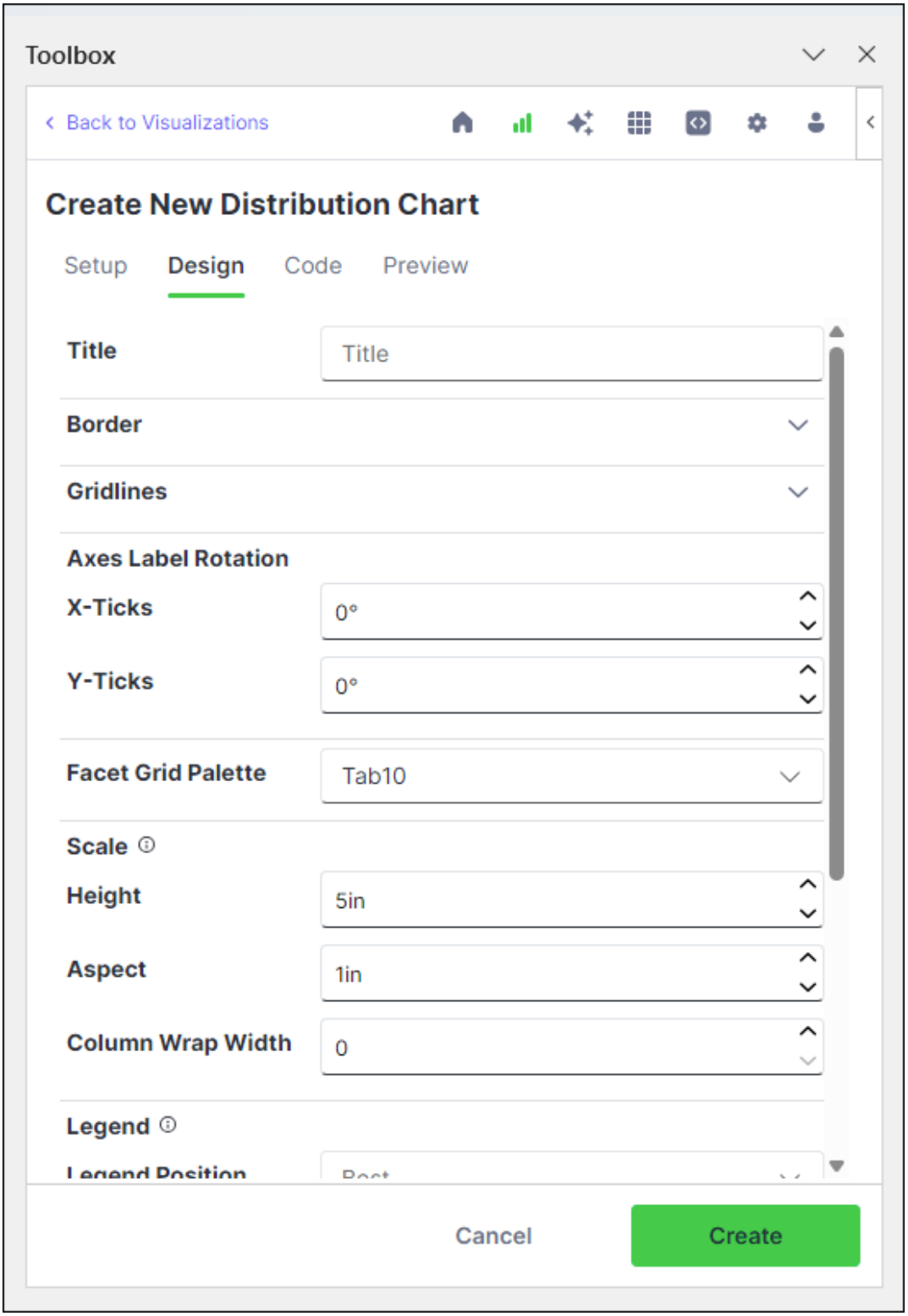
Creating a chart

Create a new chart using the following steps:

1. Under **Visualizations**, click **Visualize with Python**.
2. Click **+ New Chart**.
3. Select a chart type from the list of charts.
4. Select your source data range and configure the controls on the **Setup** tab.

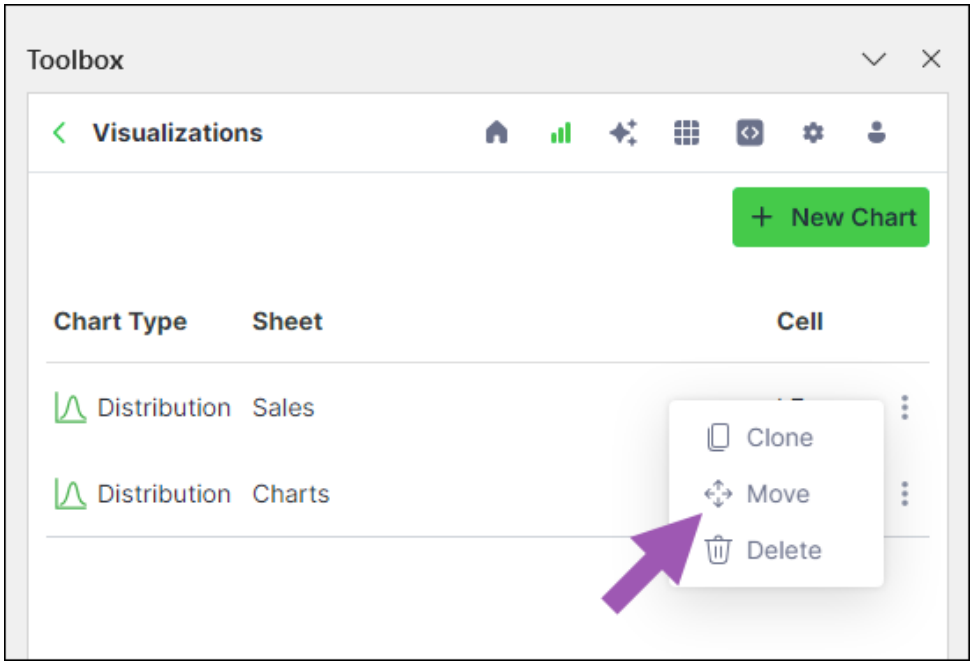


5. (Optional) Customize your chart further with the options provided on the **Design** tab.

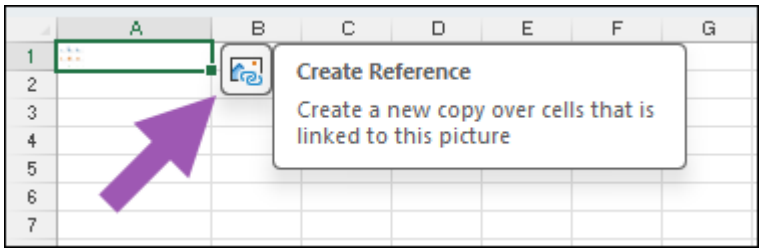


6. Click **Create**.
7. Set the location for the chart to render, then click **OK**. The chart renders within the confines of the cell.

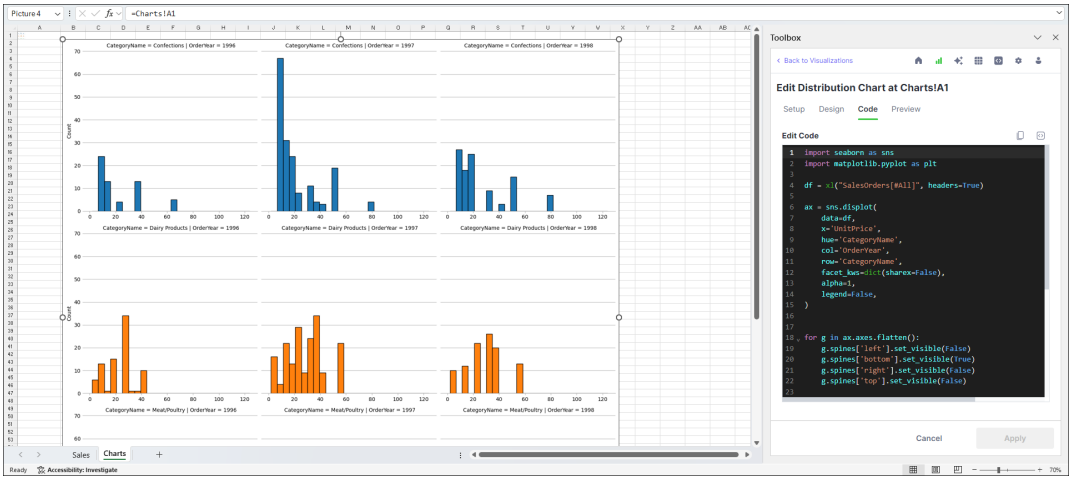
Tip: To move a chart to a new cell after creating it, click actions beside the chart, then select **Move**.



8. To properly view the chart, select the cell, then click **Create Reference**.



The chart displays as an enlarged copy. If you'd prefer to view the enlarged chart only when needed, you can delete the enlarged copy and recreate it at any time.

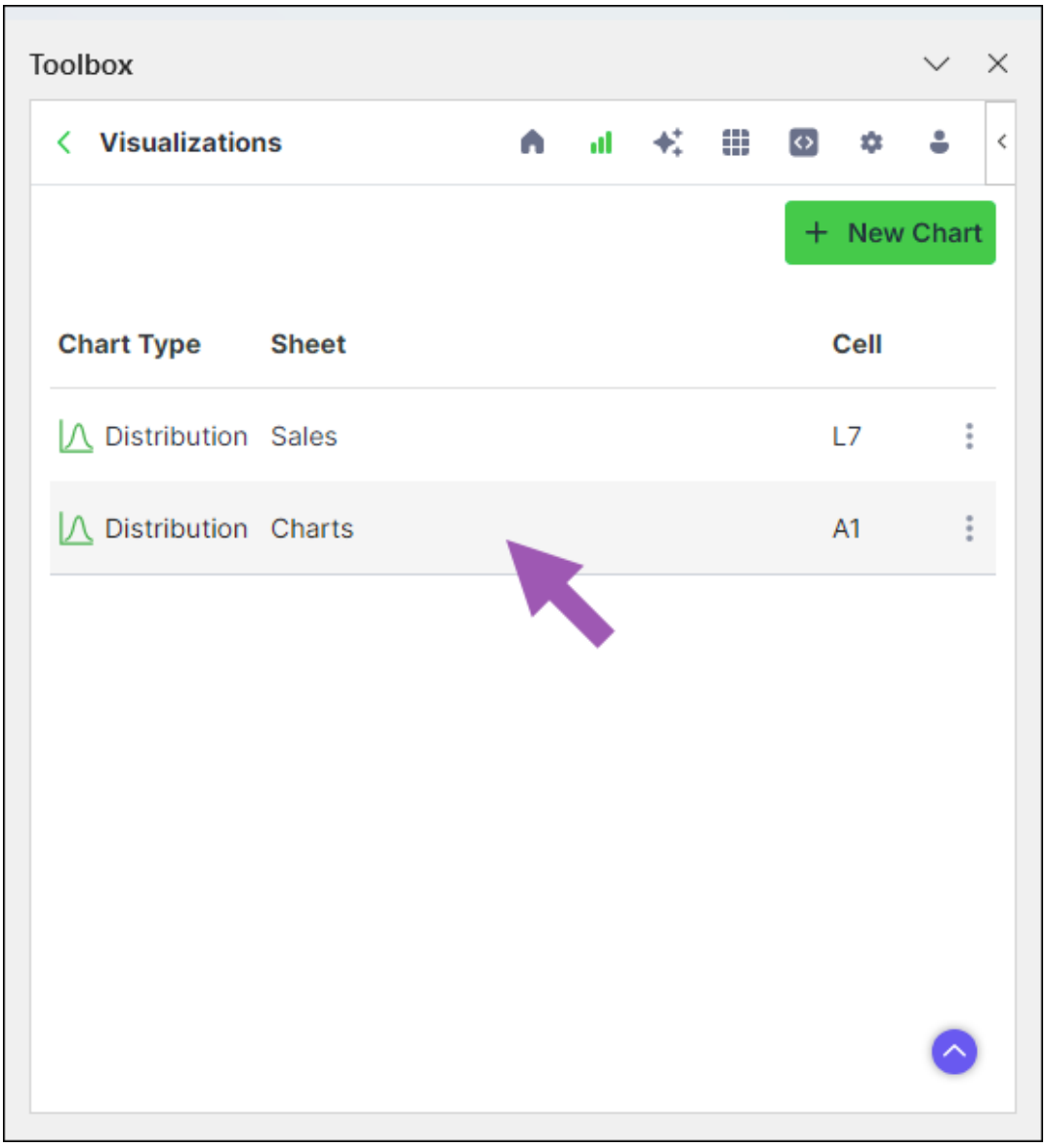


Editing a chart

Edit an existing chart by adjusting the parameters provided on the **Setup** and **Design** tabs or by manually configuring the code on the **Code** tab.

Setup and Design

1. From the Visualizations home page, click the chart you want to edit.



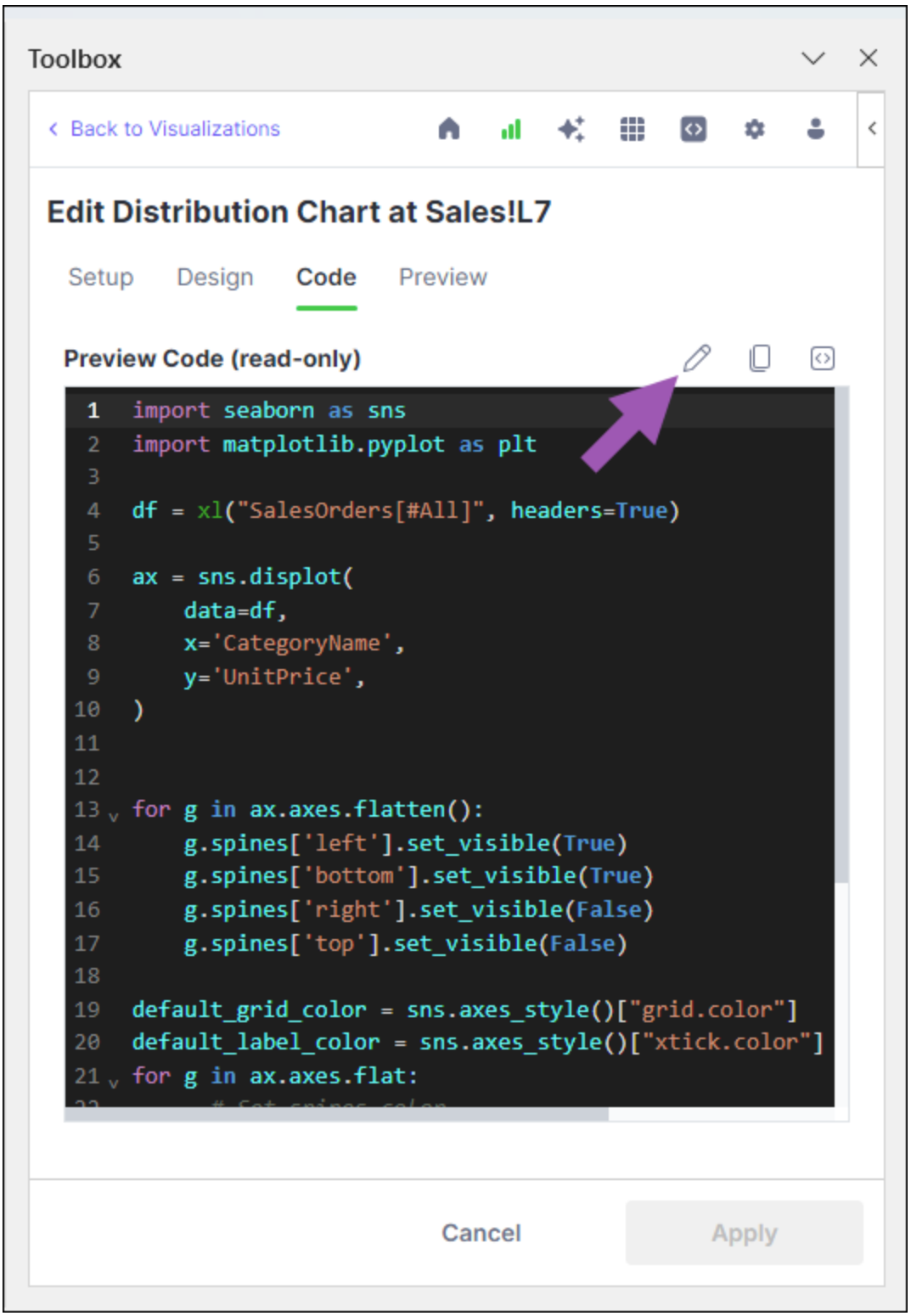
2. Make any necessary changes on the **Setup** and **Design** tabs, then click **Apply**.

Code

The **Code** tab displays auto-generated code based on your selections in the **Setup** and **Design** tabs. While the tabs offer numerous configuration options, the underlying Python library (seaborn) offers additional flexibility, as detailed in their API documentation.

To take advantage of this flexibility:

1. Enter **Edit** mode on the **Code** tab.



2. Make any necessary changes to the code, then click **Apply**.

While you are in **Edit** mode, the **Setup** and **Design** tabs become locked because free-form code changes cannot be reflected back to the UI elements in the **Setup** and **Design** tabs.

Caution: Once you edit a chart's code manually, you cannot return to using the **Setup** and **Design** tabs to configure your chart without first discarding all of the changes you've made to the chart's code. The reason is that the **Setup** and **Design** tabs will again auto-generate code and overwrite any existing code in the **Code** tab.

Anaconda Assistant

The Anaconda Assistant is an intuitive chat interface to help you generate, explain, and debug code, learn new topics, and more.

To access the Assistant, click **Chat-based Python help** under **Anaconda Assistant**.

Ask the Assistant

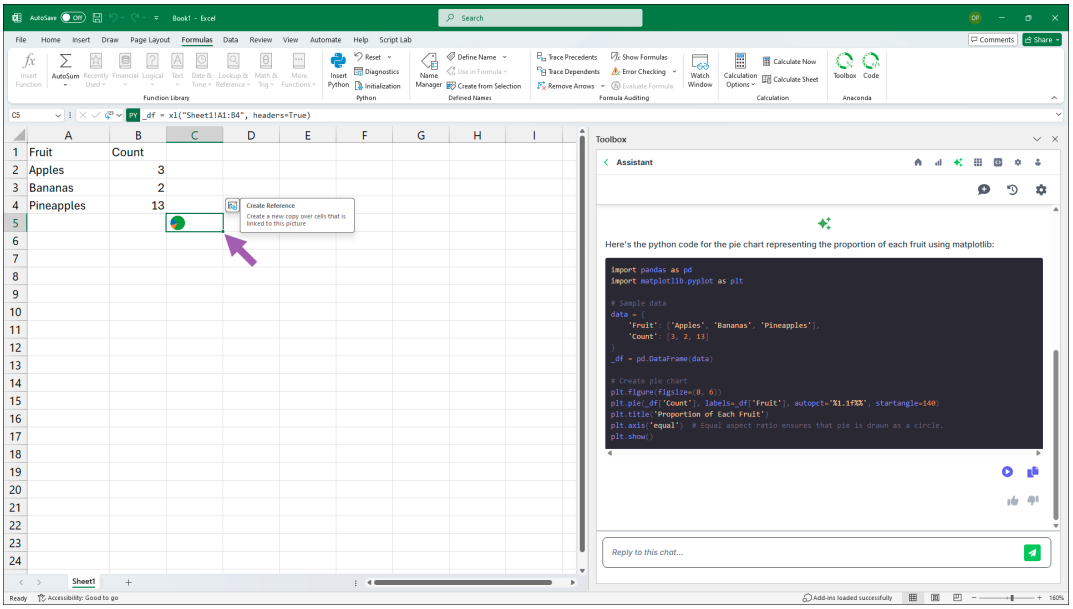
Use the Assistant to create Python code for analyzing your data.

1. Under **Help with coding tasks**, click **Generate python code to…**.
2. Pose prompts to the Assistant for guidance on analyzing the data in your workbook.
3. When provided code to run, set the placement in your workbook and click **Run**.

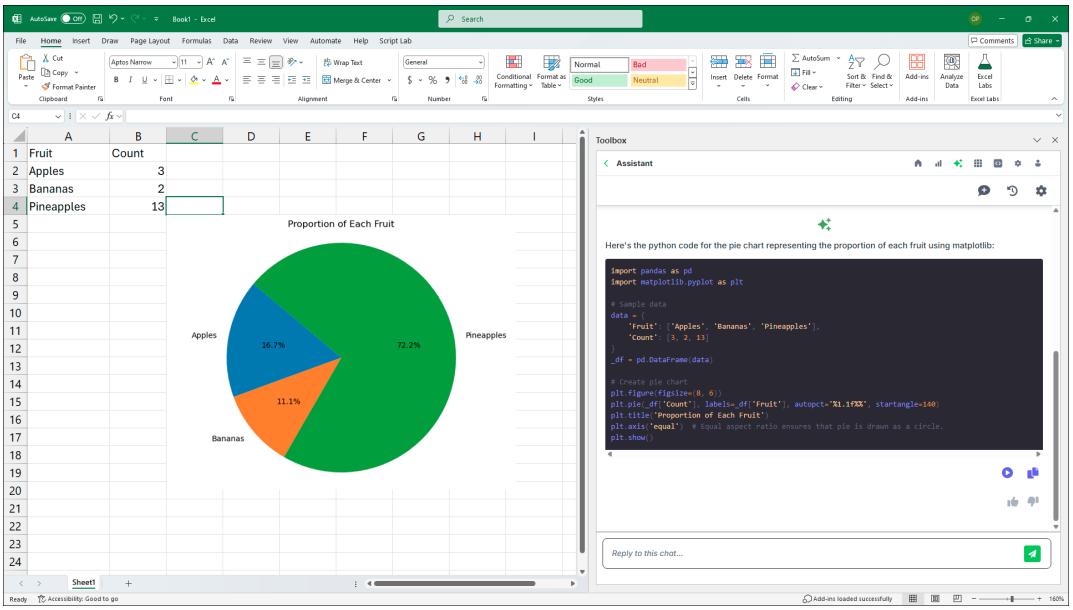
Generate a chart

Use the Assistant to create Python code for rendering charts.

1. Under **Work with Tables and Ranges**, click **Generate a chart from a table or range**.
2. Click the input cell that appears, then, in the dropdown, select a specific sheet or manually select a range of cells.
3. The Assistant provides a list of possible charts it can generate Python code for. Use the text box to choose which chart you would like generated or to ask for a new set of possibilities. Type something like the following:
    - 1
    - Generate the second idea
    - chart #3, please
    - Give me new options!
4. Once the Assistant has provided the code, click the **Placement in Workbook** cell and select a cell in your workbook to render the code.
5. Click **Run**.



6. The chart renders in the cell you set under **Output**. To view an enlarged copy of the chart, select the cell, then click **Create Reference**.



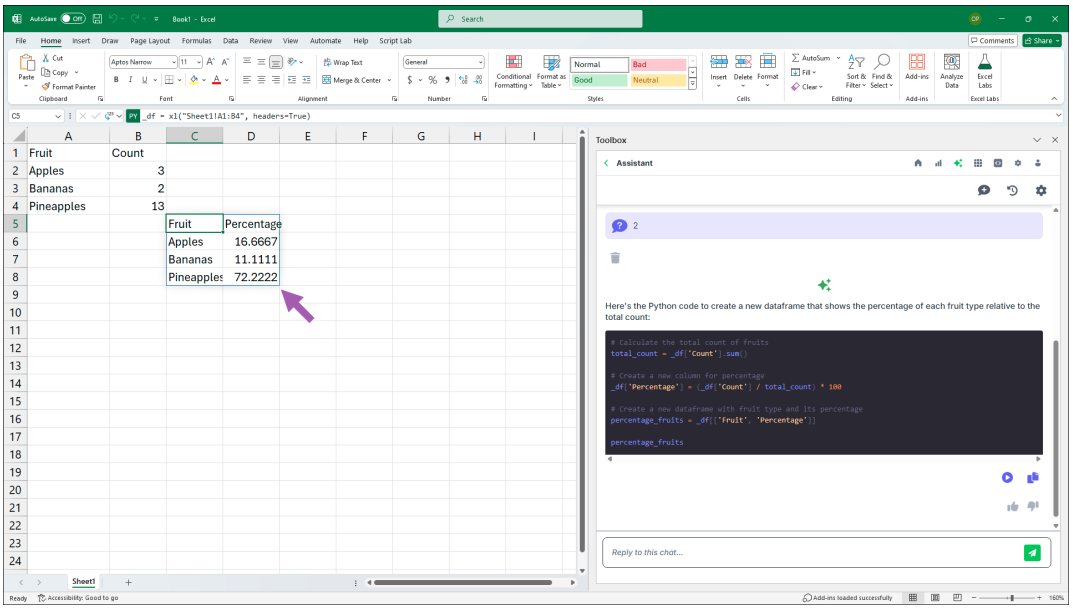
Aggregate or summarize a table or range

Use the Assistant to create Python code to aggregate your data.

1. Under **Work with Tables and Ranges**, click **Aggregate or summarize a table or range**.
2. Click the input cell that appears, then, in the dropdown, select a specific sheet or manually select a range of cells.
3. The Assistant provides a list of possible calculations it can generate Python code for. Use the text box to choose which chart you would like generated or to ask for a new set of possibilities. Type something like the following:
    - 1
    - Generate the second idea

- calculation #3, please
- Give me new options!

4. Once the Assistant has provided the code, click the **Placement in Workbook** cell and select a cell in your workbook to render the code.
5. Click **Run**.

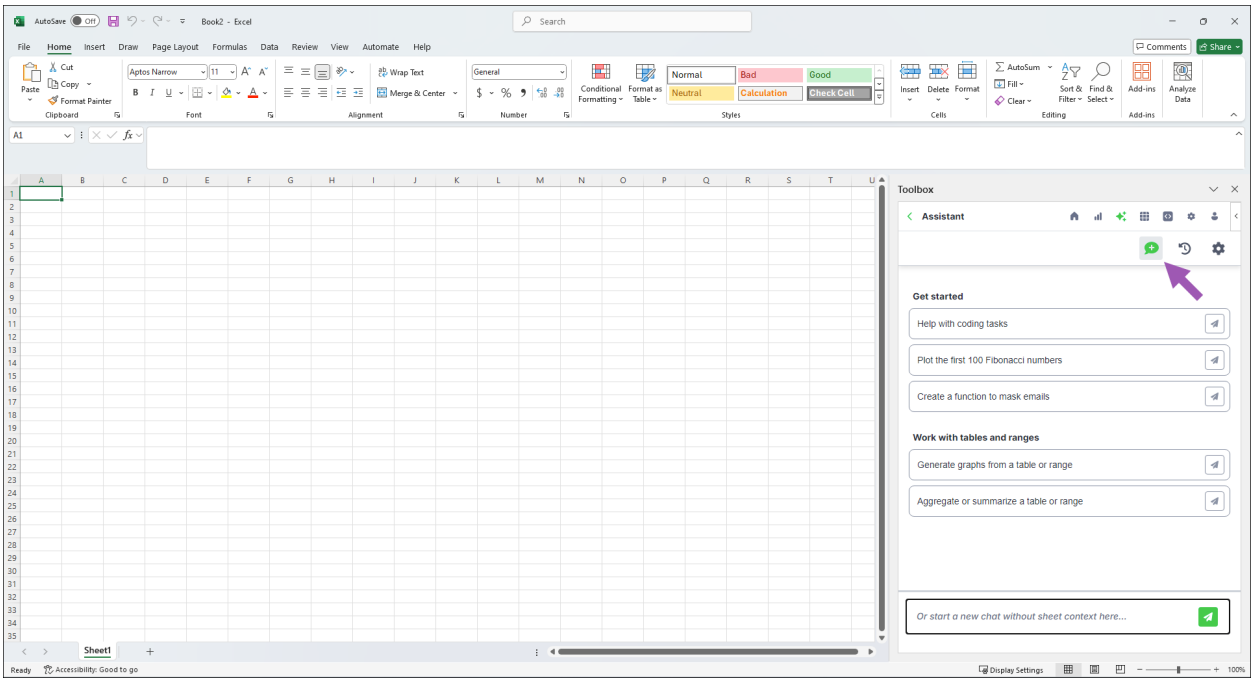


6. The results render in the cell you set under **Output**.

Note: If the results shows up in the Diagnostics pane, manually remove the `print(` and closing `)` from the formula bar above the sheet.

Start a new chat

To start a new chat, click **New Chat**.

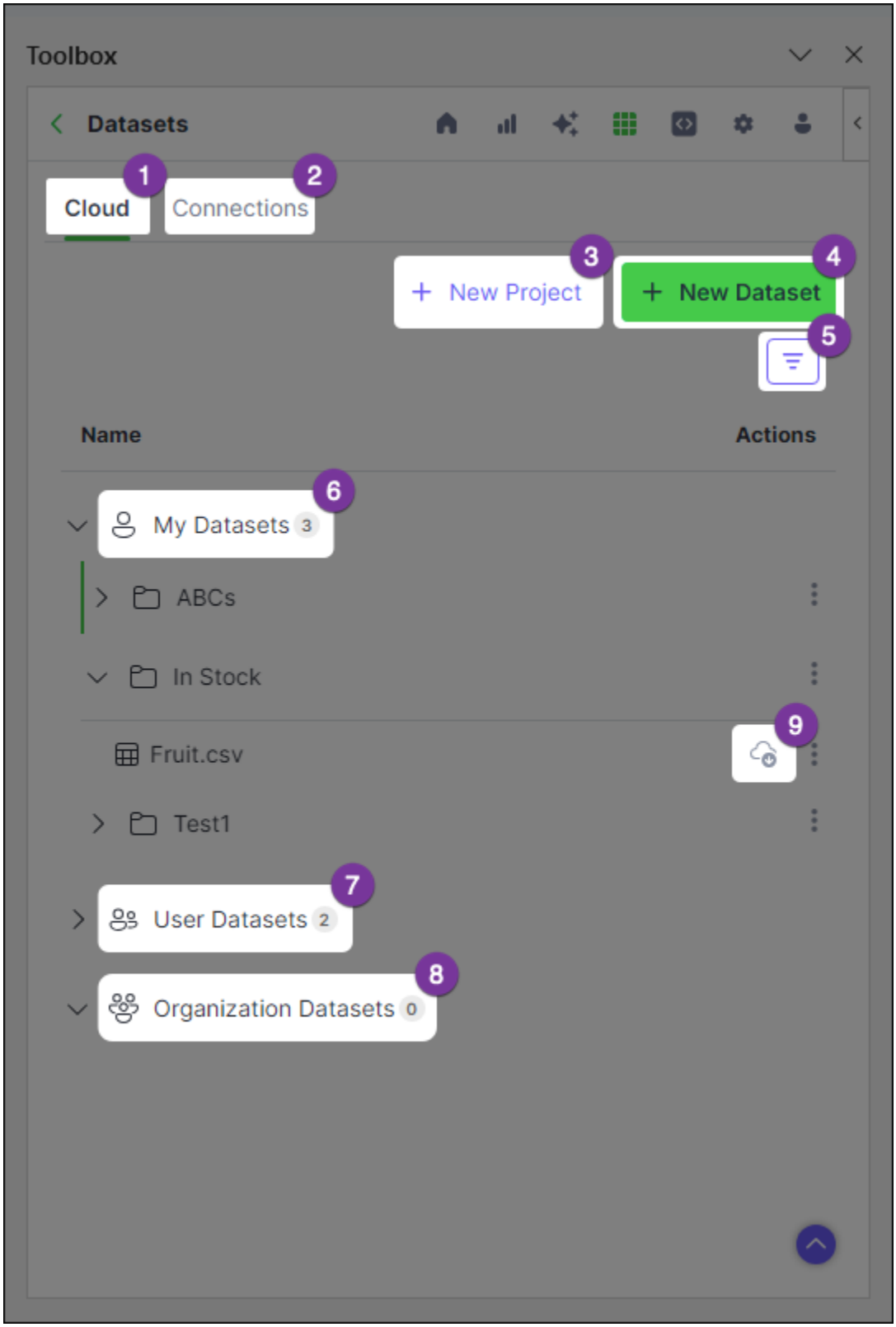


Datasets

Datasets enable you to securely upload and update datasets in Anaconda Cloud. You can then provide access to other users, as well as import your datasets to a separate workbook to continue your data analysis from any machine, anytime.

Understanding datasets

Let's take a look at the different elements and tabs within Datasets.



1. **Cloud**
   Shows all projects and project contents
2. **Connections**

Displays datasets previously uploaded to or downloaded from Anaconda Cloud

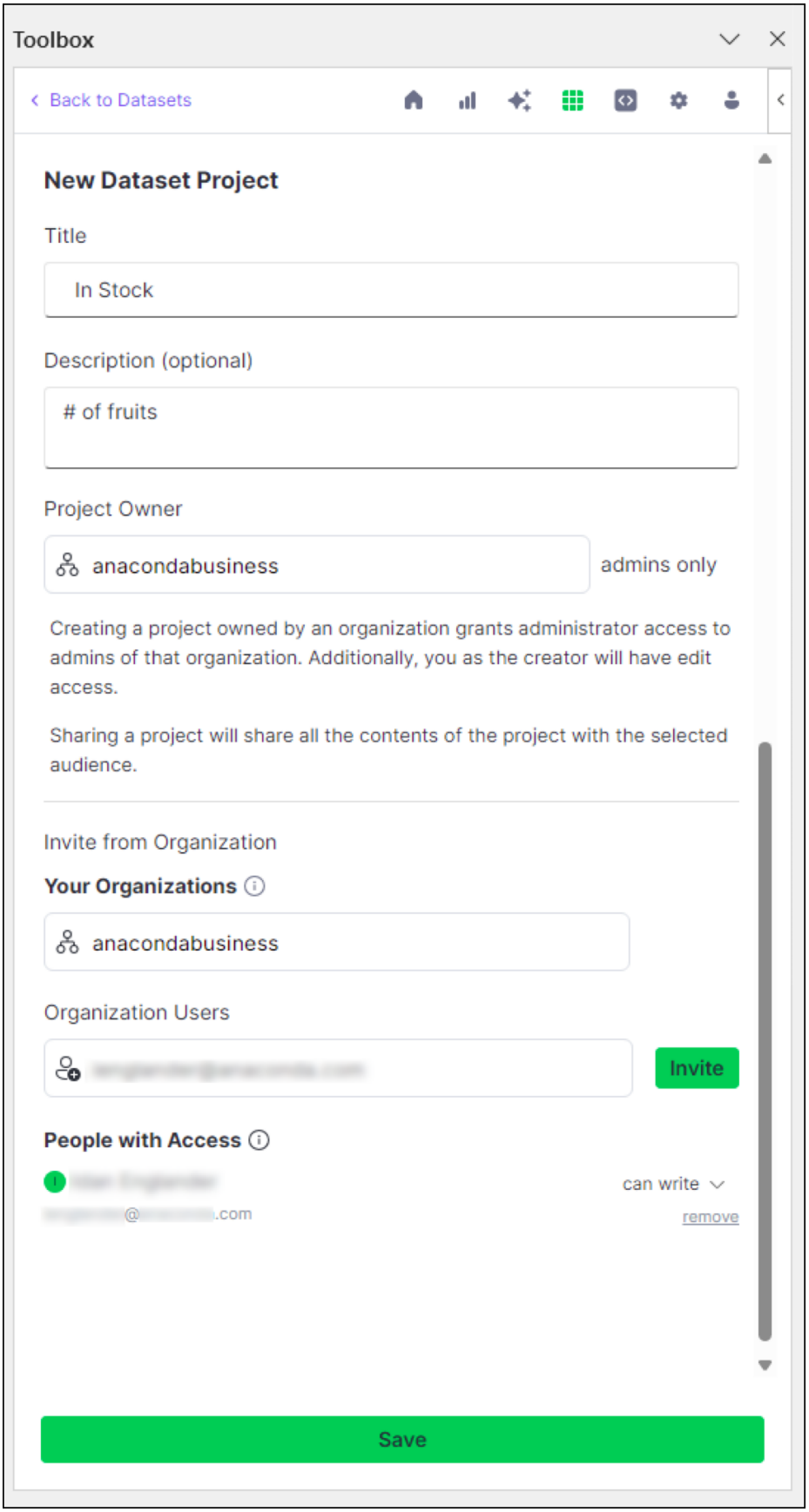
3. **New Project**
   Create a new project to store and share datasets (sheets and tables)
4. **New Dataset**
   Create a new dataset and assign it to a project
5. **Filters**
   Apply filters to efficiently locate data in your catalog
6. **My Datasets**
   A collection of all your cloud projects and their nested datasets
7. **User Datasets**
   Projects to which you have access, owned by other individuals
8. **Organization Datasets**
   Projects to which you have access, owned by organizations
9. **Status Icons**
   Indicates the *connection status* of your dataset

Creating a project

When you first access Datasets, you are prompted to create a new project. You can think of projects as folders for storing your datasets.

Create a project at any time using the following steps:

1. From the **Cloud** tab, click **+ New Project**.


Toolbox
Back to Datasets
New Dataset Project
Title
In Stock
Description (optional)
# of fruits
Project Owner
anacondabusiness
admins only
Creating a project owned by an organization grants administrator access to admins of that organization. Additionally, you as the creator will have edit access.
Sharing a project will share all the contents of the project with the selected audience.
Invite from Organization
Your Organizations
anacondabusiness
Organization Users
Invite
People with Access
can write
remove
Save

2. Enter a unique title for your project and an optional description.
3. Designate the project owner(s) for your project. By default, you are set as the only project owner.

> **Note:** Administrators and project owners are the only users allowed to edit projects. Anaconda Cloud organization administrators have full permissions for any projects owned by their organization.

4. (Optional) Provide access to your project by *inviting users* from one of your organizations.
5. Click **Save**.

Sharing a project with other users

You can share a project to collaborate with others in your organization when creating a new project, or at any time using the following steps:

1. From the **Cloud** tab, click actions beside a project for which you have edit permissions, then click **Edit**.
2. Provide access to your project by inviting users from one of your organizations.
    1. Under **Your Organizations**, select an organization.
    2. Under **Organization Users**, select a user to share your project with.
    3. Choose whether the user should have read or write access to your project.
3. Click **Save**.

Permissions

Access to projects and the actions you can perform in them are determined by your permission level for the project. By default, you as the owner of your project have admin permissions; for projects owned by an organization, the admins of that organization have admin permissions for that project.

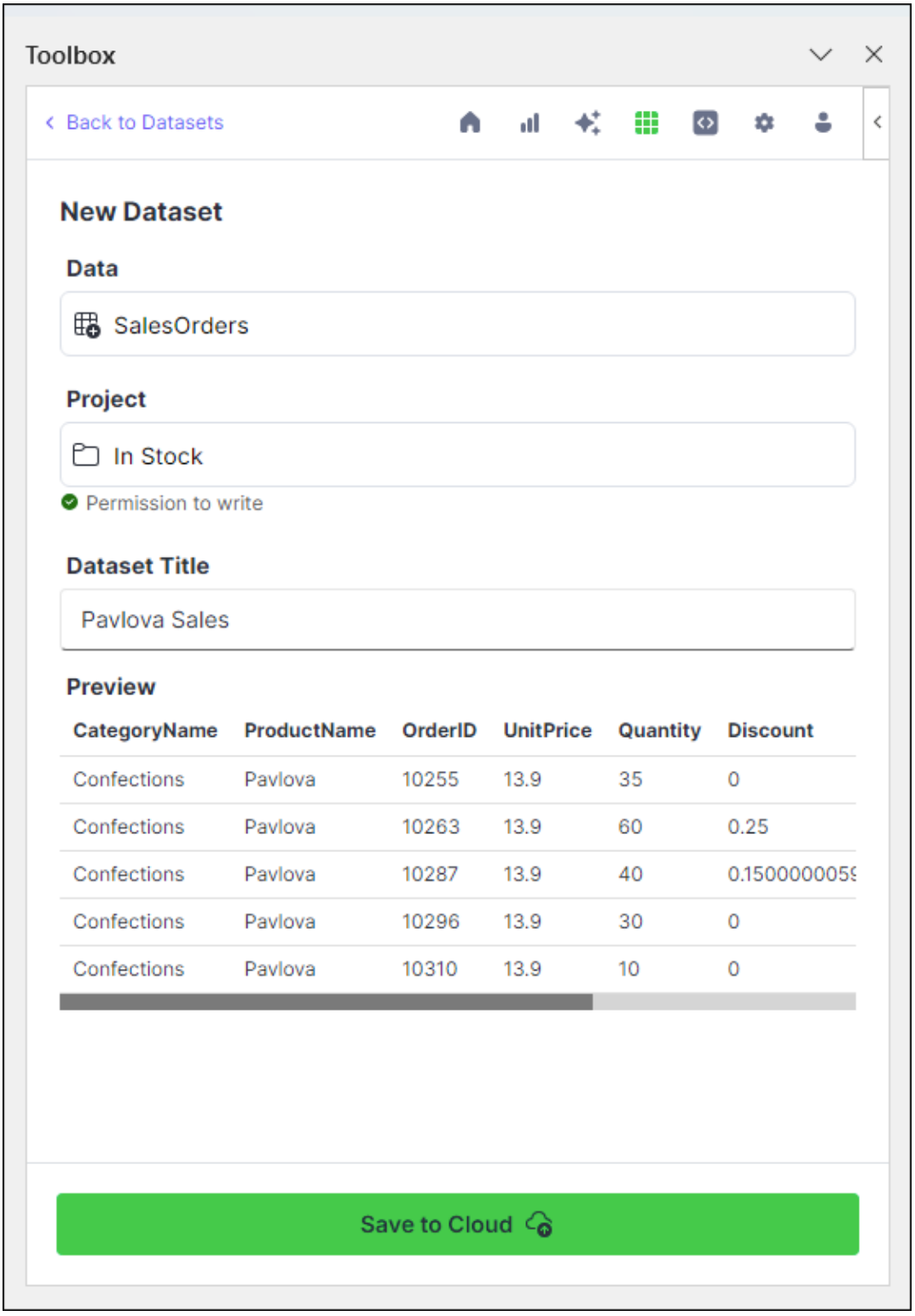
Permission level	Actions
Read	View, download
Edit	View, download, upload
Admin	View, download, upload, share, delete

Uploading data

Protect your local datasets and increase their accessibility by saving them in cloud storage. If you experience hardware failure, or need to work on a different device, your projects will be right where you left them!

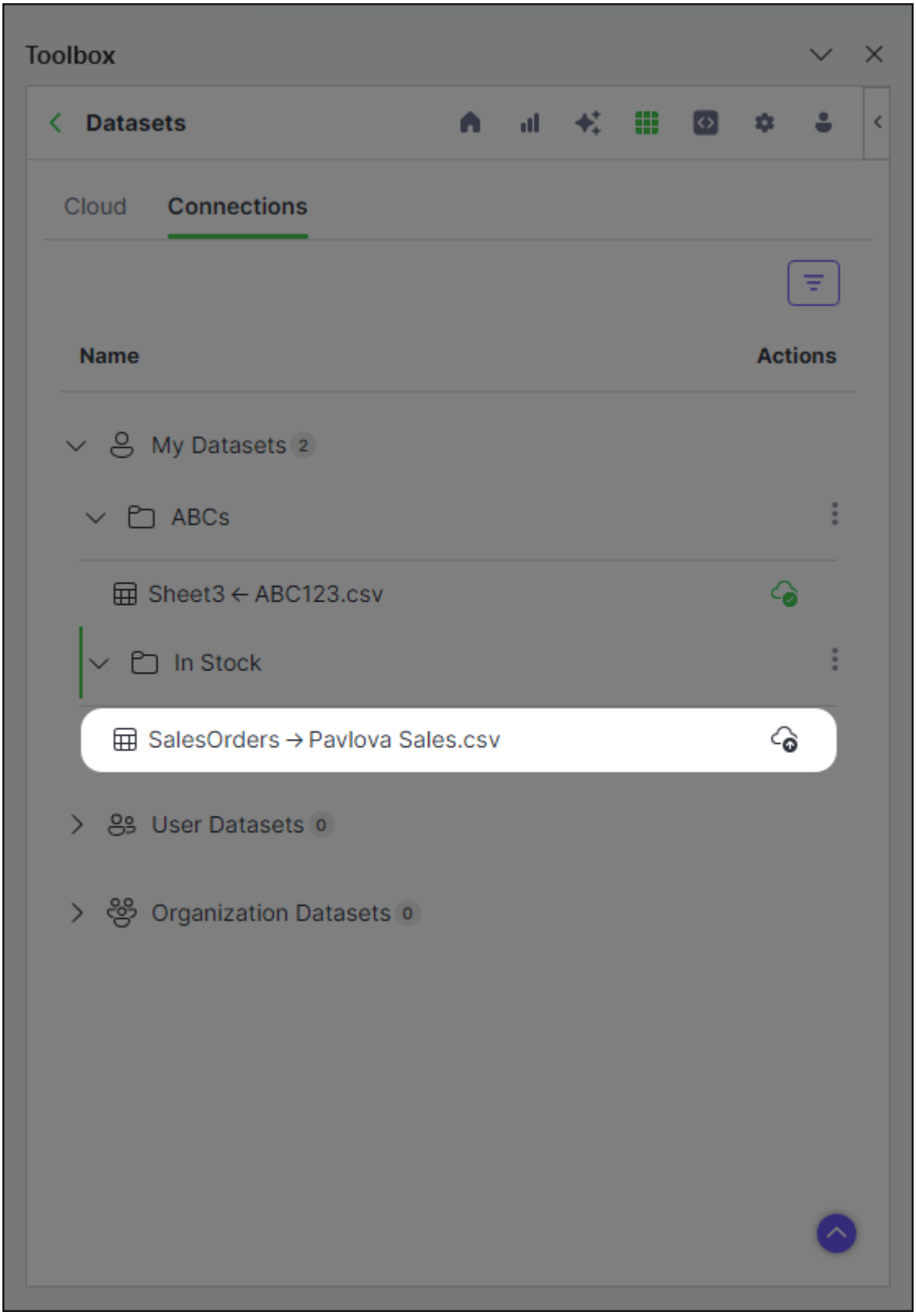
Upload sheets and tables to your projects using the following steps:

1. From the **Cloud** tab, click **+ New Dataset**.



2. Under **Data**, choose a range of data manually, a specific table, or an entire sheet.
3. Under **Project**, select a project to house your dataset.
4. Under **Dataset Title**, provide a title for your dataset.
5. Complete the upload by clicking **Save to Cloud**.

You can now see the established connection between your dataset and Anaconda Cloud on the **Connections** tab.



When you make changes to the dataset, **re-upload** it to update the dataset stored in the cloud.

Downloading data

If another user shares a project with you, or if you've uploaded a dataset in another workbook or Anaconda Notebook, **download** appears beside that dataset. Datasets can be downloaded as either an Excel range reference or as an Anaconda Code object.

Excel range

To download a dataset as an Excel range reference:

1. Click **download** beside the dataset you want to download.
2. Under **Workbook Placement**, select the sheet where you want to insert the data.
3. Complete the download by clicking **Download to Workbook**.

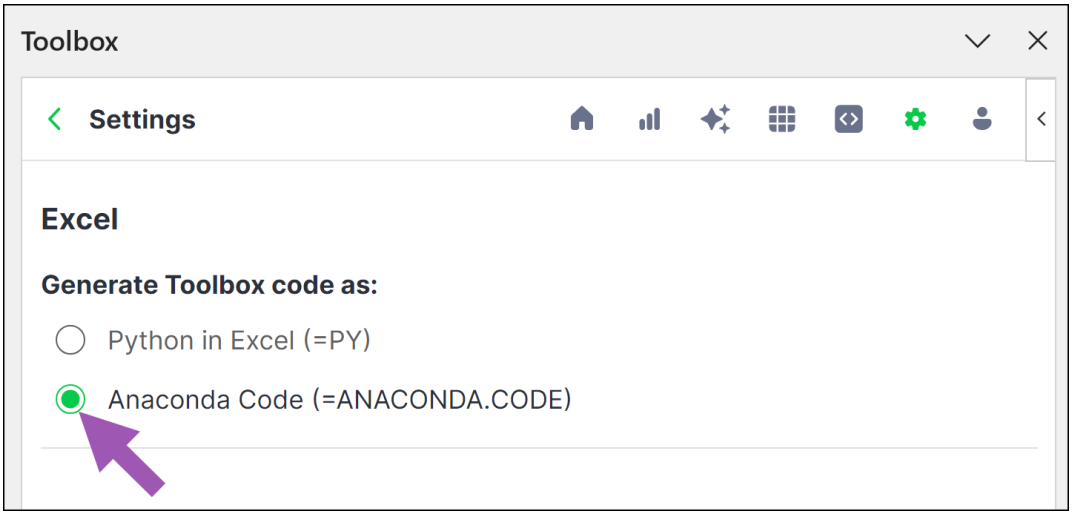
The data is now available in the selected sheet.

Anaconda Code object

To download a dataset as an Anaconda Code object:

1. Click **download** beside the dataset you want to download.
2. Select **Import as Anaconda Code object**.

Note: If you're unable to select **Import as Anaconda Code object**, go to **Settings** and, under **Generate Toolbox code as:**, select **Anaconda Code (=ANACONDA.CODE)**.



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3. Click **Click to select**.
4. Select an empty cell.
5. Click **OK** in the Select Data dialog.
6. Click **Download to Workbook**.

The selected cell will display **PyScript Data**. Click to see details about the object.

Understanding status icons

Status icons appear by each dataset. Click the icons to perform the following functions:

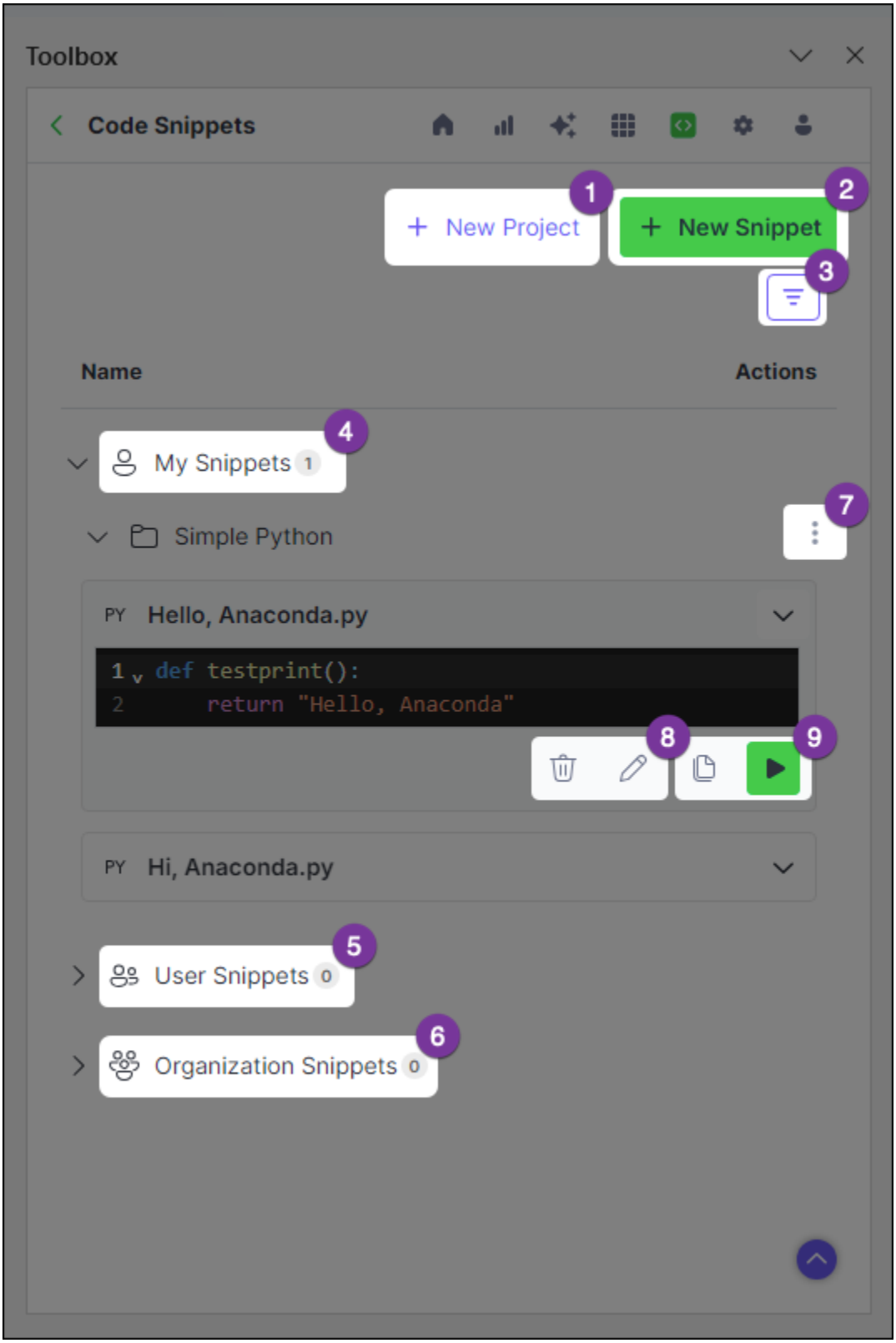
Icon	Name	Function
	Upload	Click to upload a dataset in your workbook to Anaconda Cloud.
	Re-upload	Click to re-upload the dataset in your workbook to Anaconda Cloud.
	Down-load	Click to download a dataset from Anaconda Cloud to your workbook.
	Re-download	The dataset on Anaconda Cloud has been updated. Click to update the dataset in your Excel workbook with these changes.
	Synced	The dataset in your Excel workbook is up-to-date with the dataset in Anaconda Cloud.
	Conflict	The dataset on Anaconda Cloud has been updated and now conflicts with the dataset in your Excel Workbook. Click to resolve the conflict.

Code Snippets

Code Snippets enable you to securely upload reusable blocks of code to Anaconda Cloud. You can then provide access to other users, as well as import your code snippets to separate workbooks to repeat your efforts from any machine, anytime.

Understanding connections

Let's take a look at the different elements within Code Snippets.



1. **New Project**
   Create a new project to store and share snippets

2. **New Snippet**

Create and store a new snippet in Anaconda Cloud

3. **Filters**
   Apply filters to efficiently locate snippets in your catalog
4. **My Snippets**
   A collection of all your cloud projects and their nested snippets
5. **User Snippets**
   Projects to which you have access, owned by other individuals
6. **Organization Snippets**
   Projects to which you have access, owned by organizations
7. **Project actions**
   Edit, delete, and *share projects*
8. **Snippet actions**
   Edit and delete snippets
9. **Running snippets**
   Multiple methods for *adding and running snippets in a workbook*

Create a project

When you first access Code Snippets, you are prompted to create a new project. You can think of projects as folders for storing your snippets.

You must create a project before uploading your first snippet. Create a project at any time using the following steps:

1. Click **+ New Project**.
2. Enter a unique title for your project and an optional description.
3. Designate the project owner(s) for your project. By default, you are set as the only project owner.

> **Note:** Administrators and project owners are the only users allowed to edit projects. Anaconda Cloud organization administrators have full permissions for any projects owned by their organization.

4. (Optional) Provide access to your project by inviting users from one of your organizations.
5. Click **Save**.

Sharing a snippet

You can share a snippet with others in your organization by sharing the project containing that snippet. This can be done as you're creating a new project or at any time using the following steps:

1. Click actions beside a project for which you have edit permissions, then click **Edit**.
2. Provide access to your project by inviting users from one of your organizations.
    1. Under **Your Organizations**, select an organization.
    2. Under **Organization Users**, select a user to share your project with.
    3. Choose whether the user should have read or write access to your project.
3. Click **Save**.

Uploading a snippet

With a project in place on Anaconda Cloud, you can now create a snippet and upload it to that project. This can be done from Code Snippets or, if you want to save code generated while creating visualizations of your data, you can upload a snippet from *Visualize with Python*.

Upload from Code Snippets

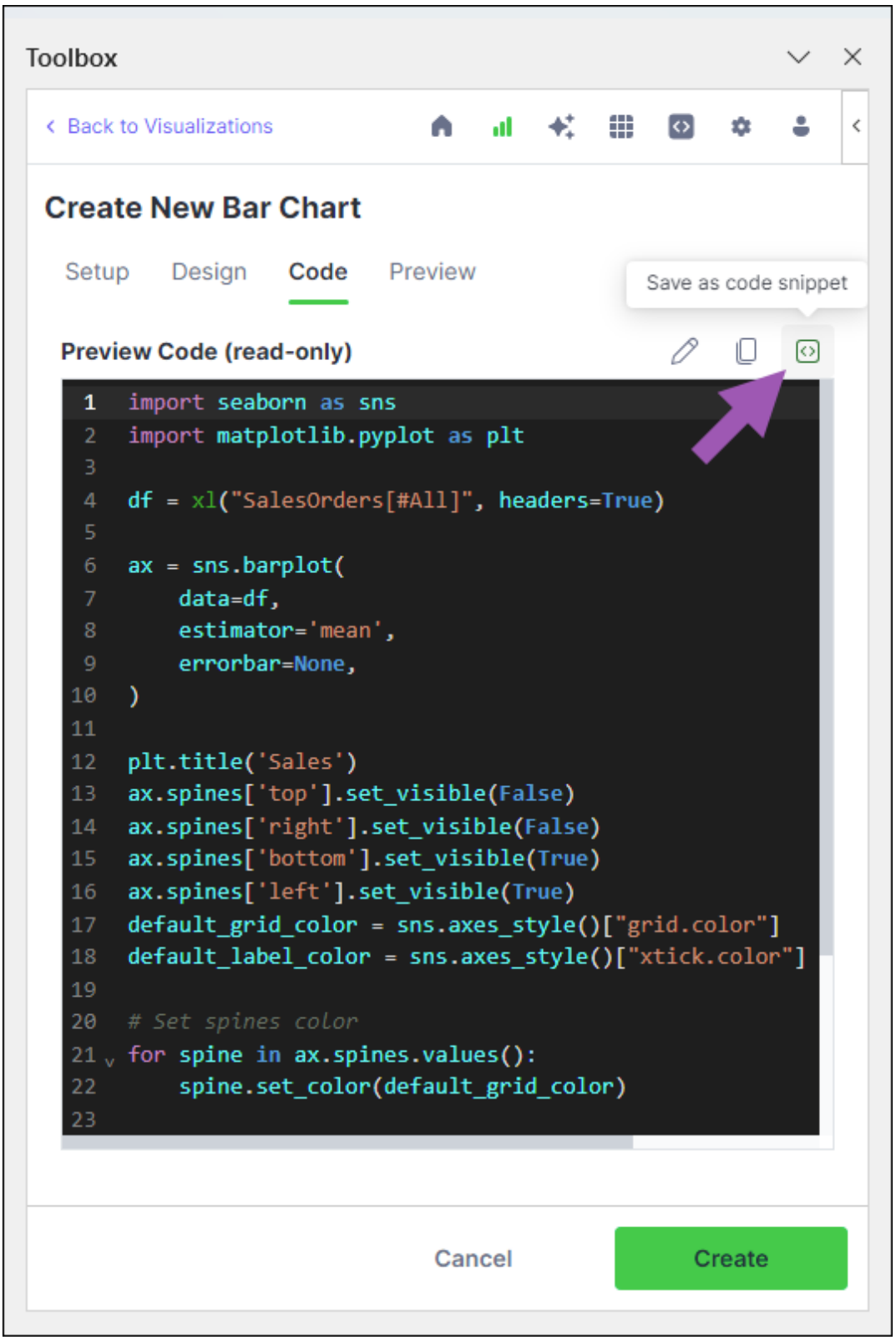
1. Click **+ New Snippet**.
2. Under **Project**, select an existing project to house your snippet.
3. Under **Snippet Title**, provide a title for your snippet.
4. Select a language, then enter your code in the code editor. Alternatively, click **+ Add From Grid** to add existing code from your workbook.
5. Click **Save to Cloud** .

Your snippet appears in its assigned project folder.

Upload from Visualize with Python

When working in Visualize with Python, Anaconda Toolbox writes code to render your data as a visualization. You can then open this code in Code Snippets to edit and save to Anaconda Cloud using the following steps:

1. From the Toolbox home screen, open **Visualize with Python**.
2. Click **New Chart**, then select a chart type.
3. Select the source range and adjust the chart settings from the **Setup** tab, customize the chart from the **Design** tab, and then open the **Code** tab.
4. Click **Save as code snippet** to open the code in Code Snippets.



5. Select a project to upload the snippet to, then provide a title.
6. If needed, edit the code to suit multiple use cases by converting labels to variables, parameterizing functions, and so on.

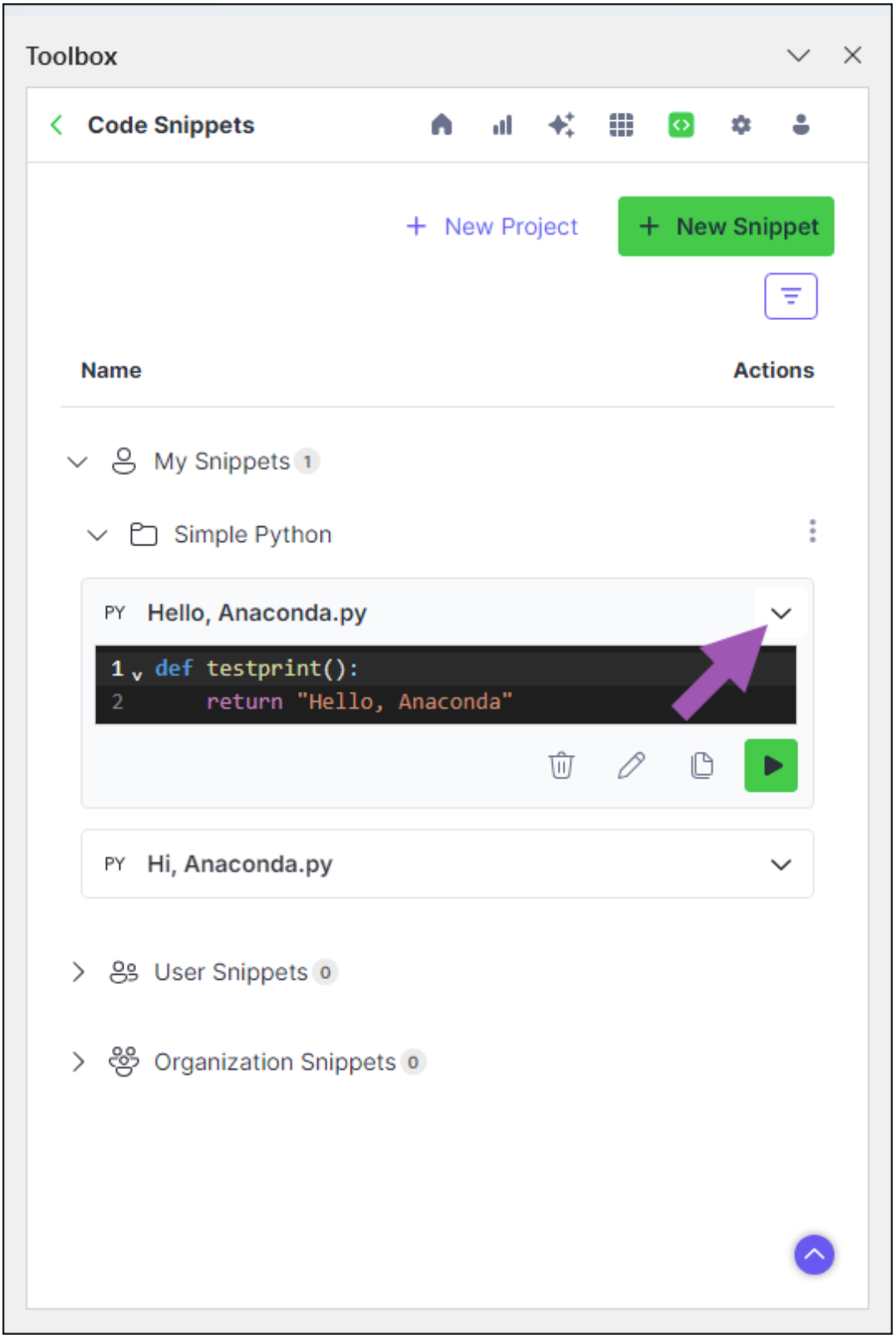
7. Click **Save to Cloud** .

Your snippet appears in its assigned project folder.

Adding snippets to a workbook

When you're ready to make use of your saved snippets, import them to a workbook using the following steps:

1. Expand the dropdown beside your snippet. A preview of your snippet appears.



2. You can now import your snippet in one of two ways:

Run in cell

1. Click **Run in cell**.
2. Select the cell where you want to insert the snippet, then click **OK**.

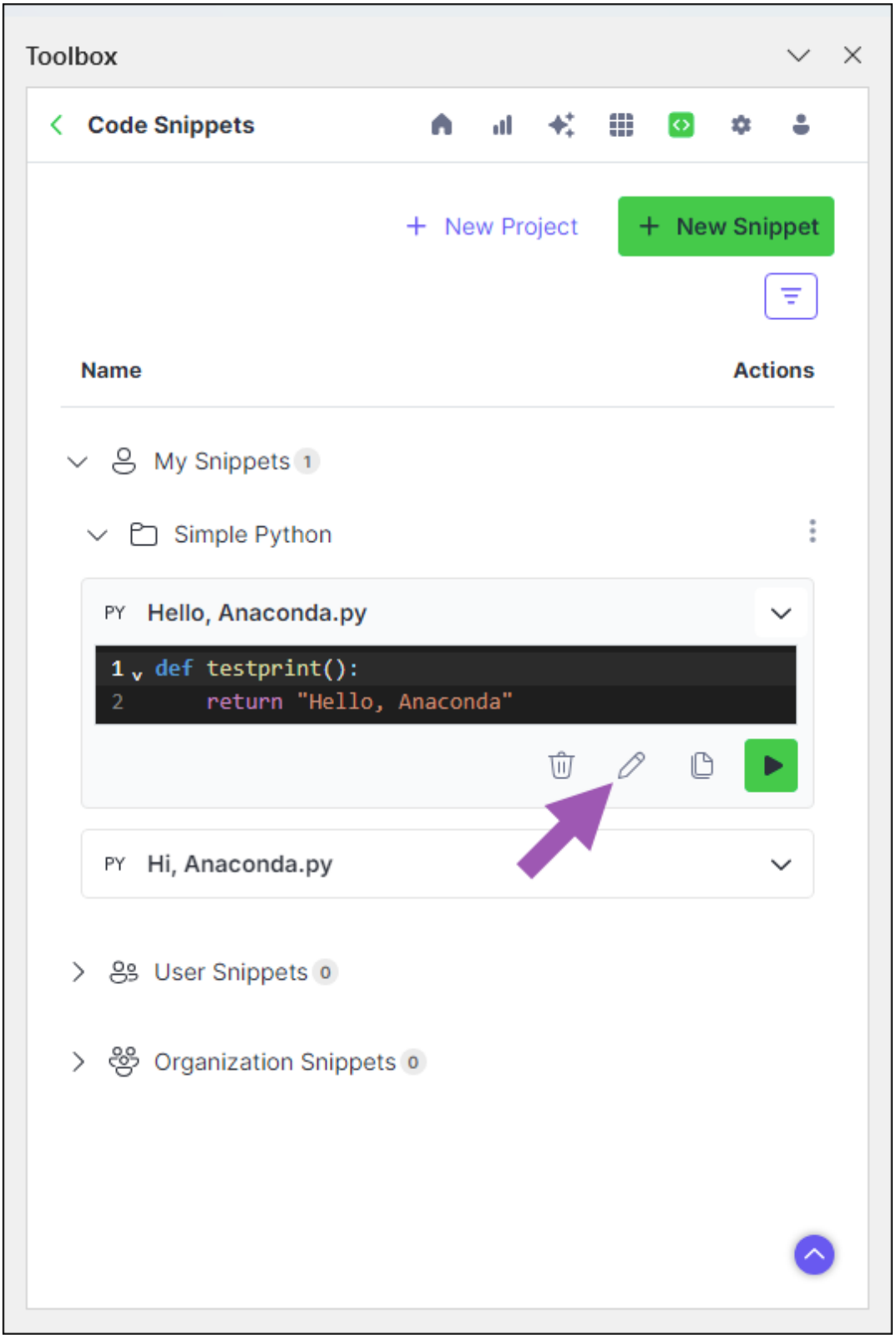
Copy code

1. Click **Copy** to copy the snippet to your clipboard.
2. In an open cell, type `=PY`, press Tab, and then paste your snippet in the green PY formula bar.
3. Use Ctrl+Enter (Windows)/Ctrl+Return (Mac) to run the code.

Editing a snippet

Changes made to a saved snippet in a workbook will not automatically update that snippet in Anaconda Cloud. Instead, you must make changes to the snippet directly within the Anaconda Toolbox extension.

1. Expand the dropdown beside your snippet. A preview of your snippet appears.
2. Click **Edit**.



3. Adjust your snippet, then click **Save to Cloud** .

Note: Changing the title of your snippet will create a new snippet, rather than updating the existing

one.

Anaconda Code

Anaconda Code empowers you to write Python code and run it locally, directly within Excel. This gives you flexibility and control over the Python environment in your workbook, allowing you to add and remove packages as needed, all while keeping code and data securely within your workbook.

Initializing Anaconda Code

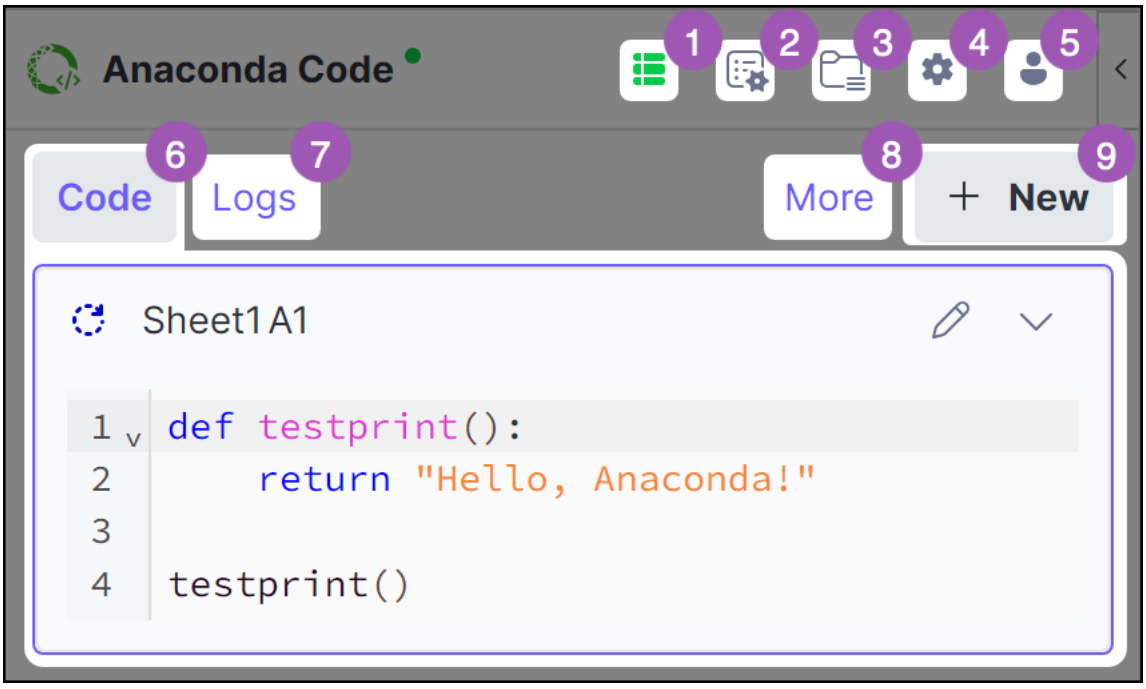
Note: Anaconda Code is included in the *Anaconda Toolbox installation*.

Anaconda Code is powered by PyScript, our open-source platform for running Python in the browser. When you first launch Anaconda Code, set up and run your PyScript Python environment using the following steps:

1. Click **Enable PyScript**.
2. Once PyScript is enabled, .

Understanding Anaconda Code

Let's take a look at the different elements within Anaconda Code using the **Dashboard** tab for reference:



1. **Dashboard**
   Create and run Python code and view script logs
2. **Imports and Definitions**
   Customize the code that affects all code in your workbook

3. **Environment**
   Manage the packages and Pyodide version for your coding environment
4. **Settings**
   Modify the *default settings for running code*
5. **Account**
   View profile, subscriptions, and app details
6. **Code**
   View and *edit the code* throughout your workbook
7. **Logs**
   View errors and print statements
8. **More**
   Quickly confirm your code's *cell linking* states
9. **New code**
   Create new code to run in your workbook

Running Python code

Create an Anaconda Code cell that can run Python code using the following steps:

1. From the **Dashboard**, click **New**, then select a cell where you want to insert your code. Alternatively, select a cell, type *=ANACONDA.CODE(*, and press Enter (Windows)/Return (Mac).
2. Enter your Python code in the code editor. If you want to reference a range of data from your spreadsheet or an *Anaconda Code object* in your code, click **Link Range** and select the range of cells or the **PyScript Data** cell.

Using the `REF` function

When you use **Link Range**, Anaconda Code creates a `REF` function in your code that returns a list of lists. The *Imports and Definitions* tab includes the following pre-defined functions to help convert the returned list of lists to different data structures.

Function	Use case	Notes
`to_df(REF(<CELL_RANGE>))`	Create a DataFrame	`to_df` assumes your data has headers
`to_array(REF(<CELL_RANGE>)`	Create a NumPy array	`to_array` assumes all data is of the same type
`to_list(REF(<CELL_RANGE>))`	Create a 1D list	`to_list` handles wide (1 x *n*) or tall (*n* x 1) data

You can change the behavior of `to_df()`, `to_array()`, and `to_list()` from the *Imports and Definitions* tab.

3. Set the *cell linking and output options*.

> **Note:** Toggle between **isolated** and **linked** modes by clicking the **plug** button.

4. Click **Save and Run**.

The selected cell is now an Anaconda Code cell. The Anaconda Code cell runs your code and displays the return value of the last expression.

Note: If you write code that doesn't have a return value (e.g., you define a function but don't call the function) and click **Run**, the cell will display "None".

Editing Python code

Do not edit your code in the cell itself; instead, modify and re-run your code directly in Anaconda Code.

Note: An Anaconda.cloud account is required for users to edit shared code.

---

1. From the **Dashboard**, click **Edit in full view** to open the edit view.
2. Adjust your code, then click **Run**.

Managing the environment

Anaconda Code hosts a single, self-contained environment, which manages the back-end software packages that enable you to run Python code within your Excel workbook. You can manage software packages within this environment to extend Python's processing, visualization, and analytical capabilities, and even select the version of Pyodide (the WASM engine used by PyScript) that you want to run Python.

Note: You can make changes to your environment at any time; however, like with all software projects, altering the environment changes the way the underlying code is interpreted and can cause unintended complications.

Choosing a Pyodide version

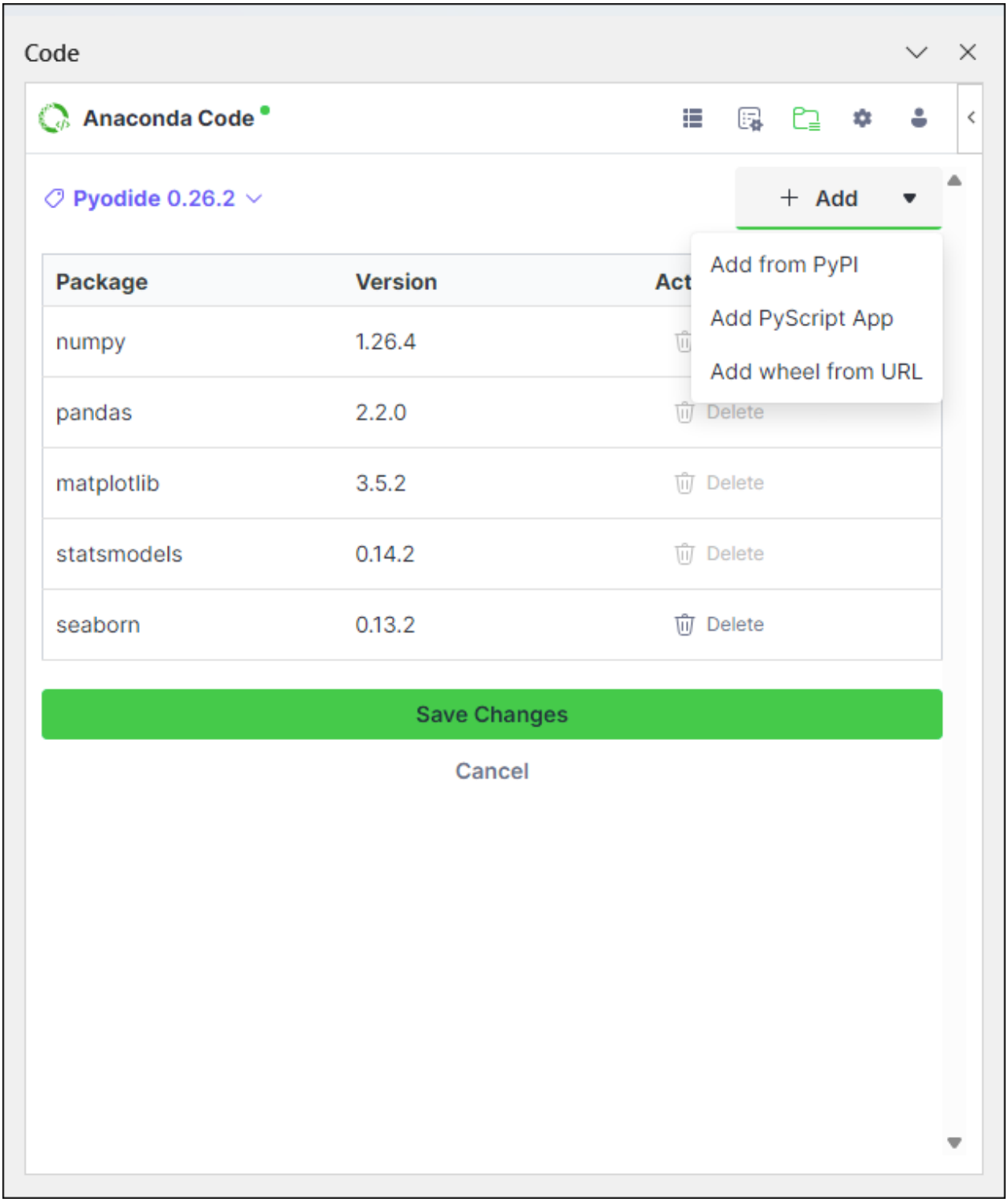
The latest version of Pyodide is used by default for all new spreadsheets. For existing spreadsheets, the versions of Pyodide and packages necessary for your code are pinned to the environment.

You can switch versions of Pyodide using the following steps:

1. From the **Environment** tab, click **Edit**.
2. To switch versions of Pyodide, click the dropdown beside your current Pyodide version.

Managing software packages

1. From the **Environment** tab, click **Edit**.
2. To add new packages, click **Add**. Alternatively, click the arrow to add from either PyPI, the PyScript app, or a direct download link to a Python wheel (`.whl`).



Note: Packages that contain compiled code might not be compatible with PyScript's WASM engine. For more information, visit PyScript.net.

To remove a package, click **Delete** beside the package you want to remove.

Customizing code initialization

You can think of Anaconda Code's **Imports and Definitions** as an initialization file for your code or like the first cell in a Jupyter Notebook. All code in this section is available to all cells, whether they are *run isolated or linked*.

Imports

To customize your code's imports:

1. On the **Imports and Definitions** tab, establish the connections to the packages you need to run your code by adding your import statements beneath the `# Add imports` comment.

   Note: You can only `import` from the packages included in the standard Python installation and those listed in the **Environment** tab.

   ---

2. Click **Run**.

Definitions

To customize your code's definitions:

1. From the **Imports and Definitions** tab, enter any classes or functions you'd like to define beneath the `# Define classes and functions` comment.

   Note: Anaconda Code comes with three pre-defined functions: `to_df(data)`, `to_array(data)`, and `to_list(data)`. See *Running Python code* to learn more about using these functions.

   ---

2. Click **Run**.

You can now call your definitions in the Anaconda Code editor. To call functions directly from an Excel cell, follow the steps in *Creating user-defined functions*.

Creating user-defined functions

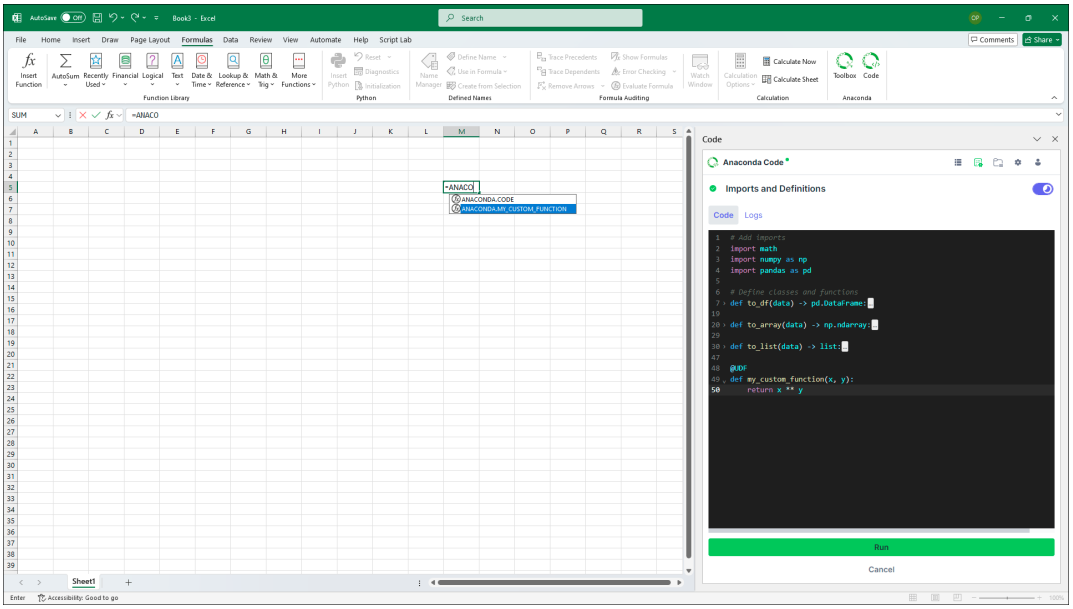
User-defined functions (UDFs) allow you to write Python functions, decorate them, and call them directly from Excel.

Creating and calling a UDF

1. From the **Imports and Definitions** tab, decorate a function with `@UDF`, as shown in the following example:

   ```
   @UDF
   def my_custom_function(x, y):
       return x ** y
   ```

2. Click **Save and Run**.
3. In an open cell, enter `=ANACONDA`. If you added the example above to your definitions list, the option to call `ANACONDA.MY_CUSTOM_FUNCTION` appears in the dropdown.



4. Arrow down to `ANACONDA.MY_CUSTOM_FUNCTION`, press Tab, and then complete the function.
5. Use Ctrl+Enter (Windows)/Ctrl+Return (Mac) to run the code.

Tip: If you'd prefer the UDF uses a name other than the function name, use the `name` argument to provide a unique name. Set `nested` to False to remove `ANACONDA.` from the name.

```
@UDF(name="MYBANK.PORTFOLIO_ANALYSIS", nested=False)
def my_custom_function(x, y):
    return x ** y
```

Using Range arguments

Specifying a `UDF.Range` argument tells Excel that the input or output of the function is a 2D range. Without specifying this, Excel refuses to pass a range of cells as input or allow a spilled range to be returned from the function.

Example usage of `.Range`:

```
@UDF
def square_me(data: UDF.Range) -> UDF.Range:
    return [[val ** 2 for val in row] for row in data]
```

You can also add type hints for Ranges using `UDF.Range[str]`, for example.

Modifying workbook settings

While you can adjust the settings for running code in your workbook on a case-by-case basis when creating and editing code, you can also assign default settings from the **Settings** tab.

Cell linking

Mode	Description
Run Isolated	Code runs independently of other cells. Variables declared in previous Anaconda Code cells cannot be referenced. Other cells can reference the return value through the `REF` function.
Run Linked	Anaconda Code cells run in row major order, comparable to how Python in Excel is executed. Variables declared in one cell can be referenced in cells following the cell that initializes them. When one cell is calculated, all linked cells recalculate in order. Linked cells run left-to-right, top-to-bottom, and can access objects defined in previously linked cells.

Cell output

Output	Description
Excel Values	When outputting a DataFrame, array, list, etc., the values will "spill" to fill the required space. If the spill were to overwrite cells containing data, the cell displays a #SPILL error.
Local Python Object	For certain object types, you can view the contents in a "Card View" by clicking the cell. You can reference this cell and the returned object like you would any other Python object.

Troubleshooting

If you encounter an issue that is not listed here, you can obtain support for Anaconda through the Anaconda community or by opening a support ticket.

Error installing functions

Cause

This error can occur when Excel loads the Anaconda Toolbox add-in and registers its custom functions. This error happens within Excel and cannot be resolved by the Anaconda Toolbox.

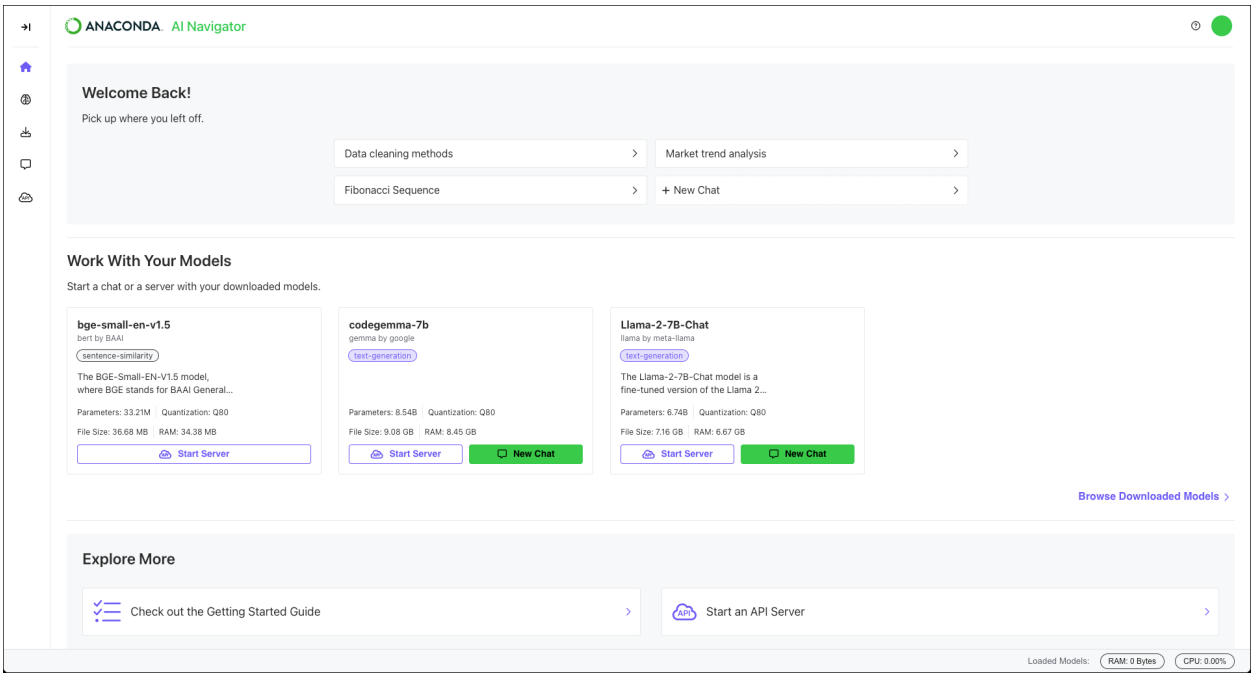
Solution

Close and reopen Excel. If the issue persists, uninstall the Anaconda Toolbox add-in, then reinstall.

2.18.10 Anaconda AI Navigator

Anaconda AI Navigator provides a comprehensive solution for downloading and interacting with powerful Large Language Models (LLMs) directly on your computer. For AI application and agent developers, Anaconda AI Navigator provides a built-in llama.cpp API server, enabling you to thoroughly test LLMs against applications you've already built. Evaluate all of the latest models in Anaconda's curated index of trusted models to find the one that best fits your needs!

By running models locally, you maintain total control over your personal and proprietary information, eliminating the need for external servers.



System requirements

Anaconda AI Navigator is currently available for Windows 11 and macOS 13+.

Requirements for Anaconda AI Navigator itself are minimal. Instead, requirements are determined by the model you want to use. Each model has two main requirements:

- **You must have enough disk space available to download and store the model.**
  Most models fall between the 2-10 GB range, but some models are quite robust, requiring up to 150 GB of storage space!
- **You must have enough memory to run the model.**
  Anaconda AI Navigator uses a combination of the main system memory (RAM) and any available CPU or GPU memory (VRAM) to run the model. Anaconda recommends a minimum of 16 GB of RAM to be able to run *most* models without issue, but some models require more memory to operate.

> **Caution:** If you do not have enough memory to run the model, Anaconda AI Navigator can become unresponsive, and you might need to force quit the application.

Each model requires a different amount of disk space and memory, and is constructed with varying *quantization methods*. Lower quantization methods require less disk space and memory than their larger counterparts, but yield a slightly

lower quality output.

Installing Anaconda AI Navigator

Anaconda AI Navigator is available for Windows 11 and macOS 13+ computers. Choose an installation guide that matches your setup.

Anaconda Navigator

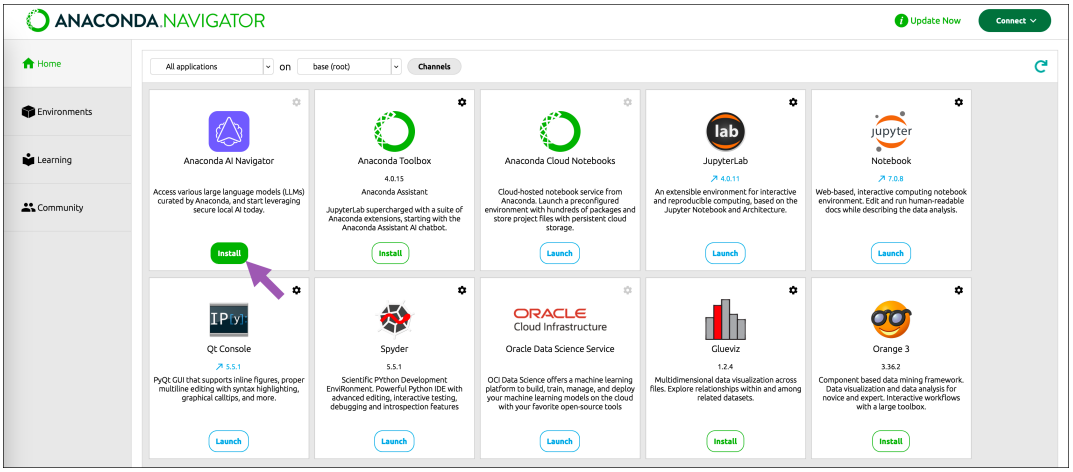
If you have Anaconda Navigator 2.6.2 or later installed, you can use it to install Anaconda AI Navigator on your machine!

Note:

- For more information and instructions for obtaining Anaconda Navigator, see *Installing Navigator*.
- If you need help updating Anaconda Navigator to the latest version, see *Updating Navigator*.

---

1. Open Anaconda Navigator.
2. Locate the Anaconda AI Navigator tile and click **Install**.



3. Once installed, click **Launch** on the same tile to launch the application.

Install for Windows 11

Download Windows Installer (Intel/AMD x86-64)

1. Download Anaconda AI Navigator for Windows above.
2. Open the `.exe` file you downloaded to initiate installation.

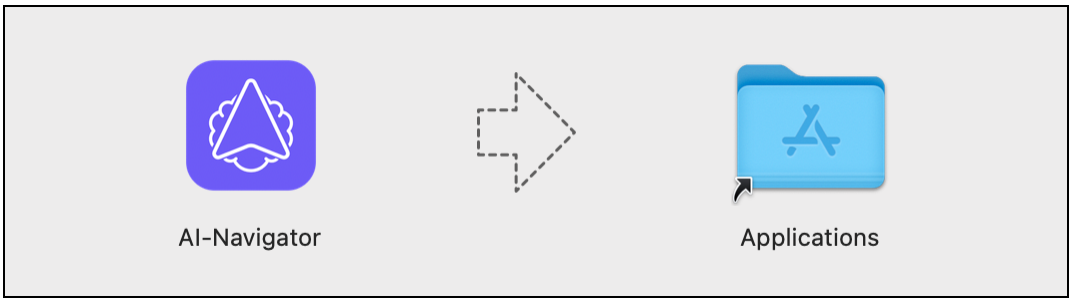
Anaconda AI Navigator automatically launches when installation is complete, and a shortcut icon is added to your desktop.

Install for macOS 13+

Download for Apple Silicon (M1 and later)

Download for Intel Chip

1. Download Anaconda AI Navigator for your macOS chip architecture above.
2. Open the `.dmg` file you downloaded.
3. Drag the application icon into the **Applications** folder.



4. Open the application from the Launchpad.

Check out the *Getting started with Anaconda AI Navigator guide* to familiarize yourself with the application!

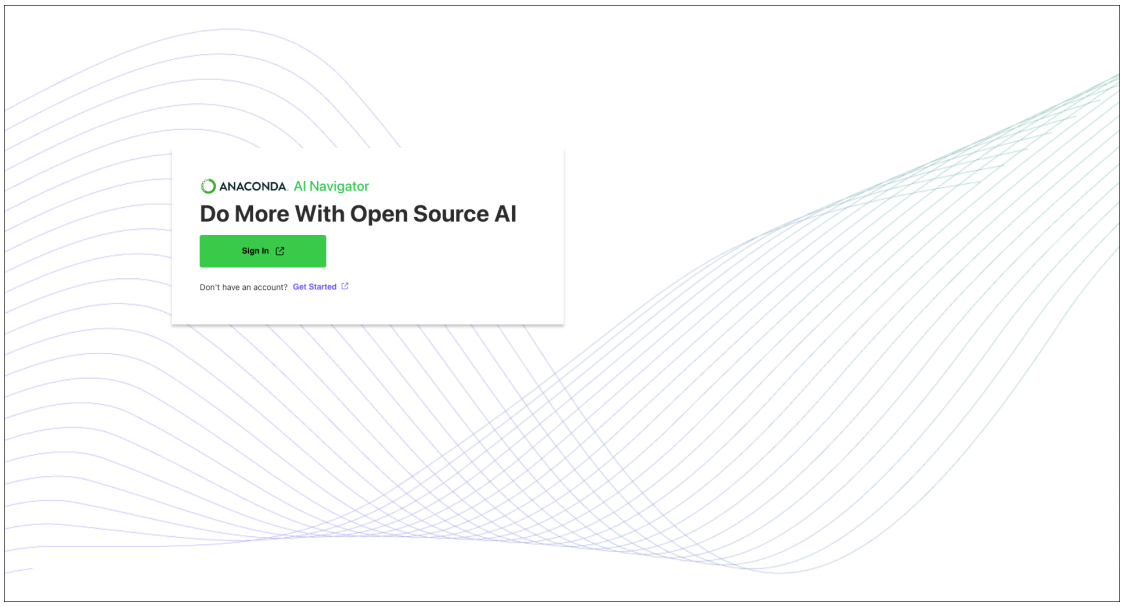
Getting started with Anaconda AI Navigator

This guide is designed to walk you through the essential steps to begin using Anaconda AI Navigator. It provides guidance on signing in, downloading models, chatting with a model, and loading models into the API server.

> **Note:** For help with installation, see *Installing Anaconda AI Navigator*.

Signing in

Anaconda AI Navigator requires you to have an Anaconda Cloud account to sign in. If you do not have an Anaconda Cloud account, click **Get Started** to register an account for free.



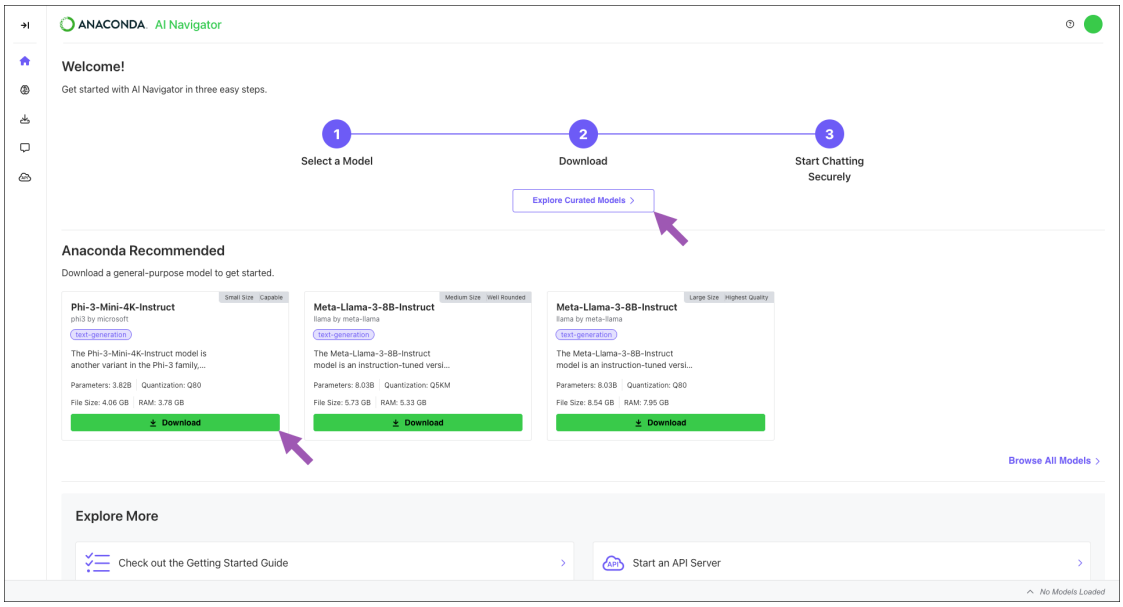
You have several options for account registration:

- Register with a GitHub, Gmail, or Microsoft account
- Sign in manually with an email and password

Once your account is created, or if you already have an account, **Sign In** using the same method you used to register your account.

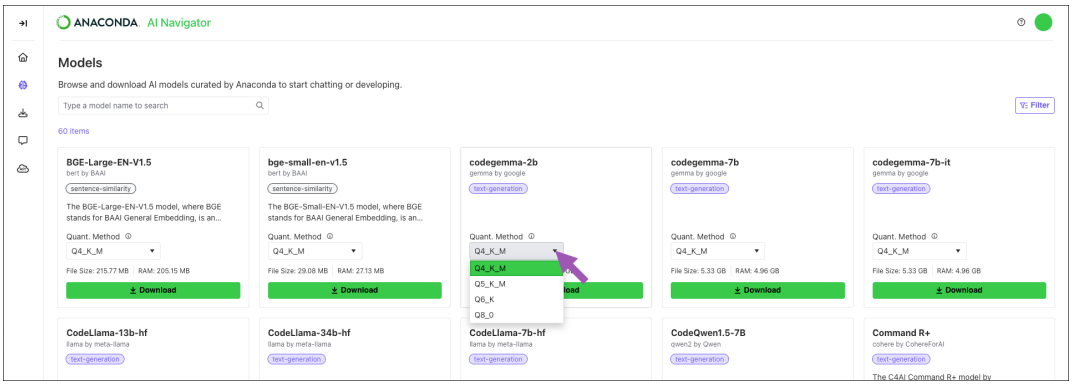
Browsing and downloading models

If you do not have a model downloaded, you can download one of Anaconda's recommended models by clicking **Download** on the model tiles shown on the **Home** page, or you can click **Explore Curated Models** to open the **Models** page and view a full list of curated models available for download.



To download a model:

1. Select **Models** from the left-hand navigation.
2. Locate a model you want to download.
3. Open the **Quantization Method** dropdown and select a file quantization level, then click **Download** to download the model locally.



Note: Models are listed alphabetically by name. Verify that you have the available disk space and RAM required before you download a model.

For more information about models and quantization methods, see *Models*.

Chatting with models

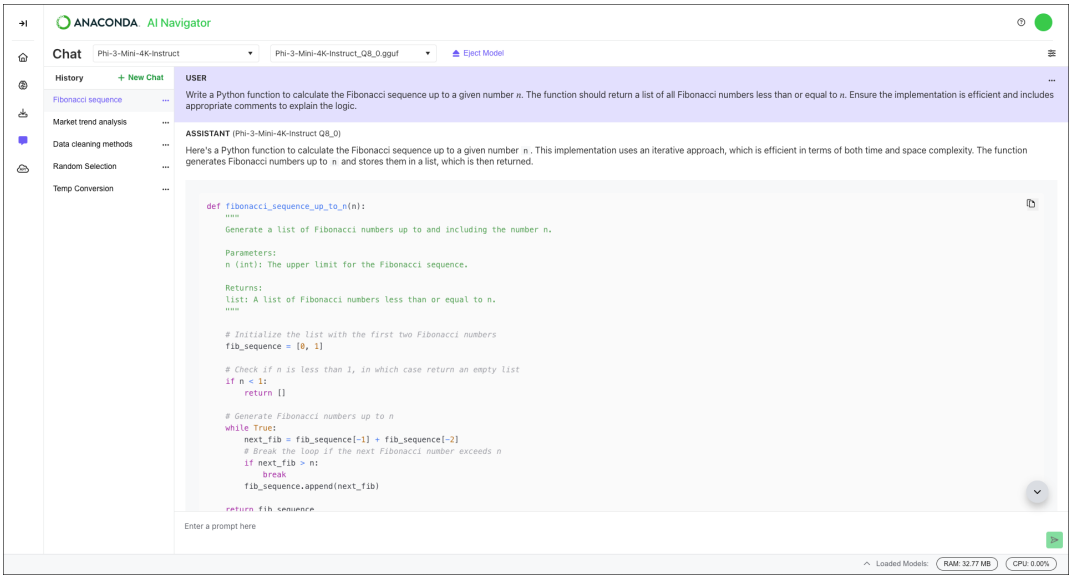
Load the model you downloaded into the chat interface to start using it immediately!

To load a model into the chat interface:

1. Select **Chat** from the left-hand navigation.
2. Open the **Specify Model** dropdown and select your model.
3. Open the **Specify File** dropdown and select your model file.

Note: If you only have one file for the model, it is automatically loaded into the chat interface.

4. Enter a prompt to chat with the model!



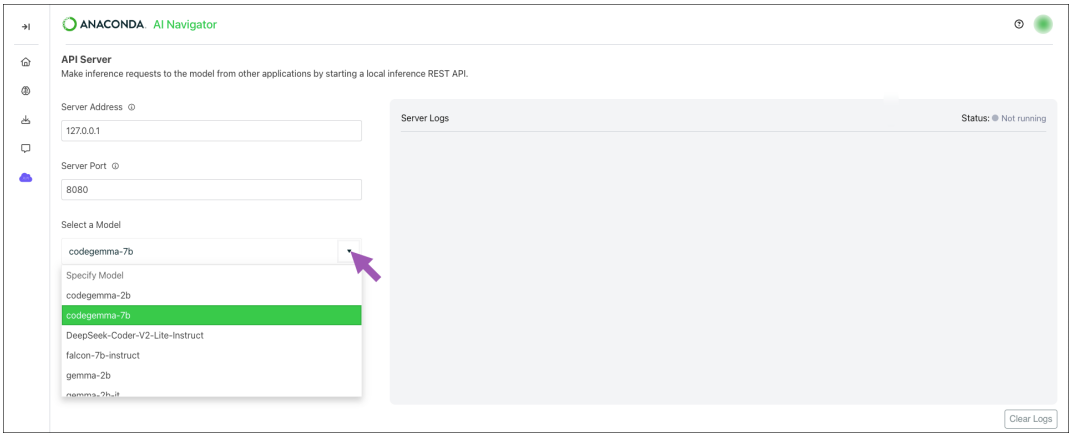
For more information on using the chat feature, see *Chat*.

Loading a model into the API server

Make inference requests to the model from other applications by loading it into the API server.

To load a model into the API server:

1. Select **API Server** from the left-hand navigation.
2. Open the **Specify Model** dropdown and select your model.



3. Open the **Specify File** dropdown and select your model file.

> **Note:** If you only have one file for the model, it is automatically selected.

4. Click **Start** to start the server and expose the model to inference requests at the specified server address.

For more information about the API server, see *API server*.

For step-by-step instructions on how to build a basic chatbot application in Python that makes inference requests to the API server, see our *Developing a chatbot tutorial*.

User guide

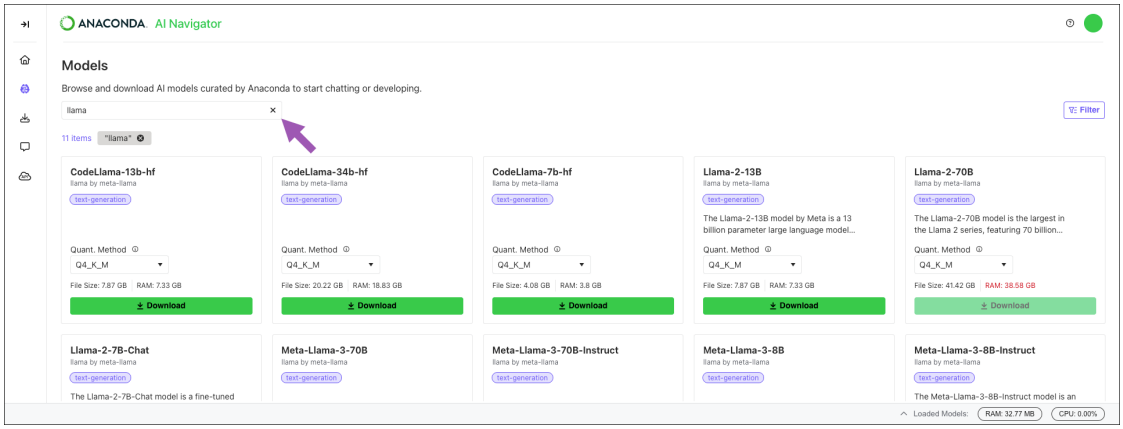
The user guide provides more fine grain information about the various features of Anaconda AI Navigator, as well as tutorials designed to help you learn how to get up and running with Anaconda AI Navigator's API server.

Models

Browsing models

Anaconda hosts a repository of open-source and partner models that you can explore and use to test and develop your applications.

Tip: Use the search function to locate models by name.



Model types

Anaconda AI Navigator currently supports the following types of models:

`text-generation`: Designed to produce coherent and contextually relevant natural language based on user input. Common use cases for `text-generation` models are:

- **Content Creation** - Drafting articles, outlines, summaries, or creative pieces
- **Coding Assistance** - Generating or autocompleting code and troubleshooting issues
- **Data Extraction** - Summarizing and interpreting large datasets to uncover insights
- **Conversational AI** - Driving chatbots and virtual assistants to create "human-like" dialogue

`sentence-similarity`: Encodes text into a vector database (embedding) that captures semantic meaning. These embeddings enable efficient comparison and analysis of text based on contextual relationships. Common use cases for `sentence-similarity` models are:

- **Semantic Search** - Finding documents or items contextually similar to a query, beyond keyword matching
- **Recommendation Systems** - Suggesting relevant items by comparing semantic similarity to user preferences
- **Text Classification** - Categorizing text (e.g., spam detection, sentiment analysis) based on meaning
- **Clustering Analysis** - Grouping similar text data to uncover patterns or organize information

Contact us if you are interested in specific models or use cases.

Filtering models

You can apply filters to help you efficiently locate the models that you want to use.

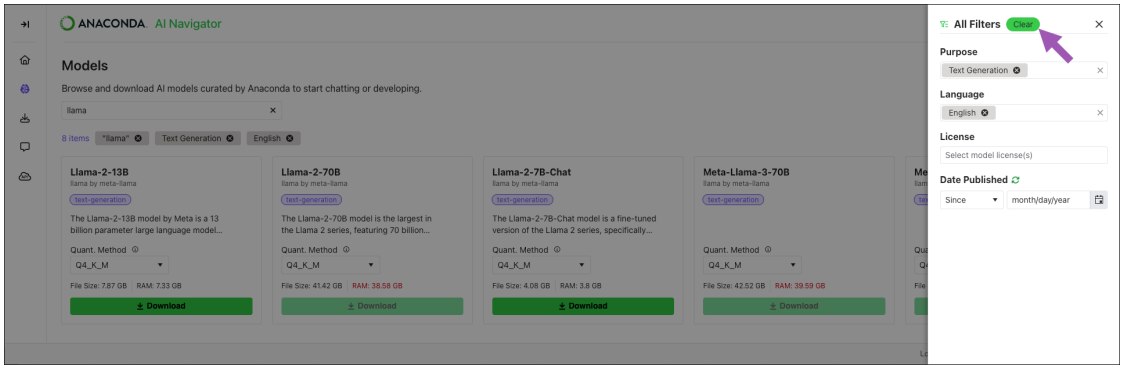
To apply a filter:

1. From the **Models** page, click **Filter**.
2. Open a filter dropdown and select a filter option.
3. Repeat as necessary to filter down to only the models you want.

Model filters:

- **Purpose** - Filter models based on their associated *model type*.
- **Language** - Filter models by which spoken languages they can understand.
- **License** - Filter models based on their usage permissions and restrictions, such as permissive, non-commercial, or specific distribution terms.
- **Date Published** - Filter models based on the date they were published to AI Navigator. Click **Refresh** to reset the currently applied date filter.

Click the beside any filter to remove it, or click **Clear** in the **All Filters** panel to clear all filters at once.

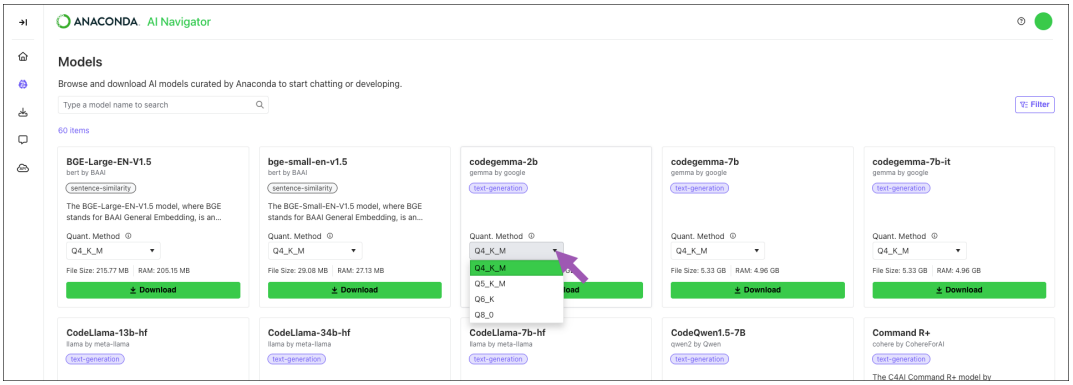


Downloading models

Anaconda provides a variety of LLM models for you to work with, constructed at various levels of *quantization*.

To download a model:

1. Select **Models** from the left-hand navigation.
2. Locate a model you want to download.
3. Open the **Quantization Method** dropdown and select a file quantization level, then click **Download** to download the model locally.



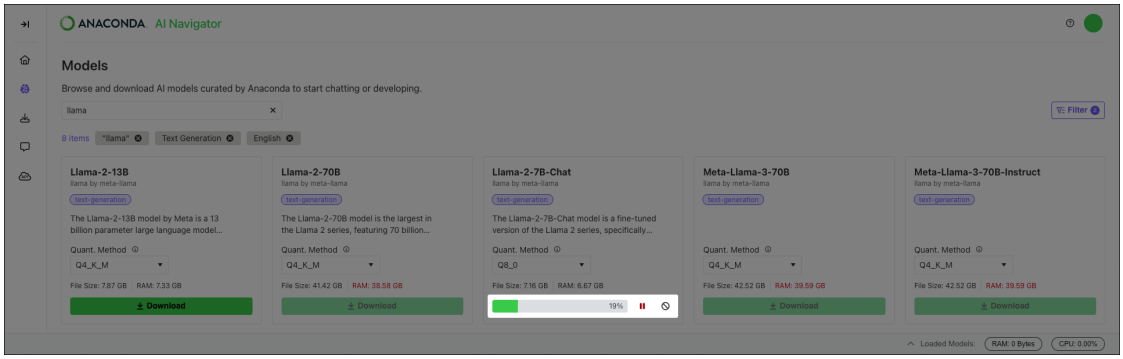
Note: Models that show a **Downloaded** tag on their tile indicate that you have downloaded at least one file for that model.

Managing downloads

Manage your downloads using the **pause**, **play**, or **cancel** buttons beside the progress bar at the bottom of the model's tile.

Tip:

- You can also manage your downloads from the **My Models** page.
- Downloads automatically pause if you exit the application for any reason.



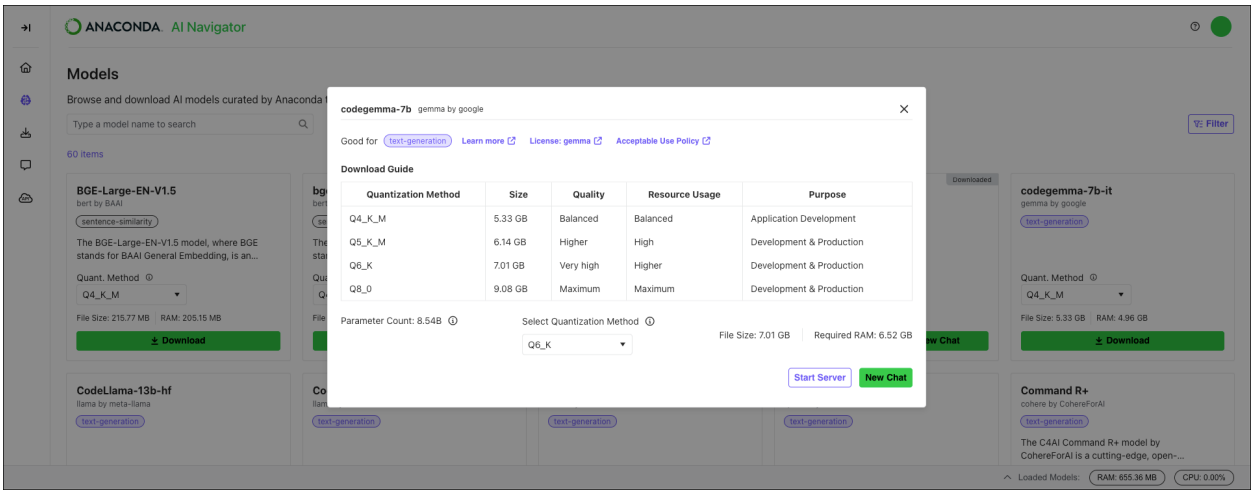
Deleting models

To delete models that you have downloaded, navigate to the **My Models** page and click **Delete** beside the model. If you have more than one file downloaded for a model, select a file to delete from the model's dropdown first.

Note: Models cannot be deleted while they're loaded into the chat interface or the API server.

Viewing model details

Click on a model's tile to view its details. From here, you can read a brief description of the model and see important information about it, such as its file size at each quantization level, *parameter count*, the quality you can expect from the model's output, how much resource usage can be expected by the model, and its intended purpose (for use in either development or production).



Tip:

- Hover over a tooltip to view detailed information about the various aspects of a model.
- Click **Learn more** to visit the Huggingface webpage of the organization that built the model.

Chat

The Chat feature of Anaconda AI Navigator enables users to interact with a locally downloaded model. The chat interface is mainly intended to provide you with a space to evaluate how different models handle specific tasks and scenarios. If the model you are using isn't responding to your test prompts in a helpful way, try a different model. Once you see some success with a particular model, you can load it into the API server and test your own applications against it to see how the model handles your users' input.

Loading a model

Load a model you've downloaded into the chat interface to interact with it. To load a model:

1. Select **Chat** from the left-hand navigation.
2. Open the **Specify Model** dropdown and select your model.
3. Open the **Specify File** dropdown and select your model file.

Note:

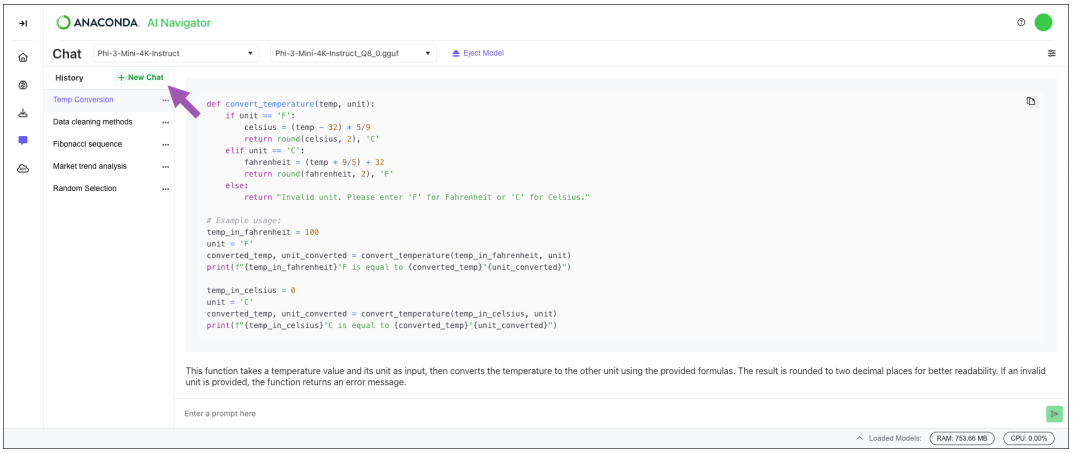
- If you only have one file for the model, it is automatically loaded into the chat interface.
- You can switch between models that you have downloaded at any time during a chat.

Starting a new chat

All chats are initially created as **New Chat <#>**, but are topically renamed based on your initial prompt to the model.

To start a new chat:

1. From the **Chat** page, click **New Chat**.



2. If necessary, *load a model into the chat interface*.
3. Enter a prompt to chat with the model.

Stopping a response

Sometimes a model can start generating a lengthy and off topic response to a prompt. To stop the model from generating its response, click **Stop** in the prompt field.

Renaming a chat

You can provide a specific name to a chat at any time. To rename a chat:

1. From the Chat page, open a chat's actions dropdown and select **Rename**.
2. Enter a name for your chat.

> **Note:** Chat names over 27 characters are truncated.

Deleting a chat

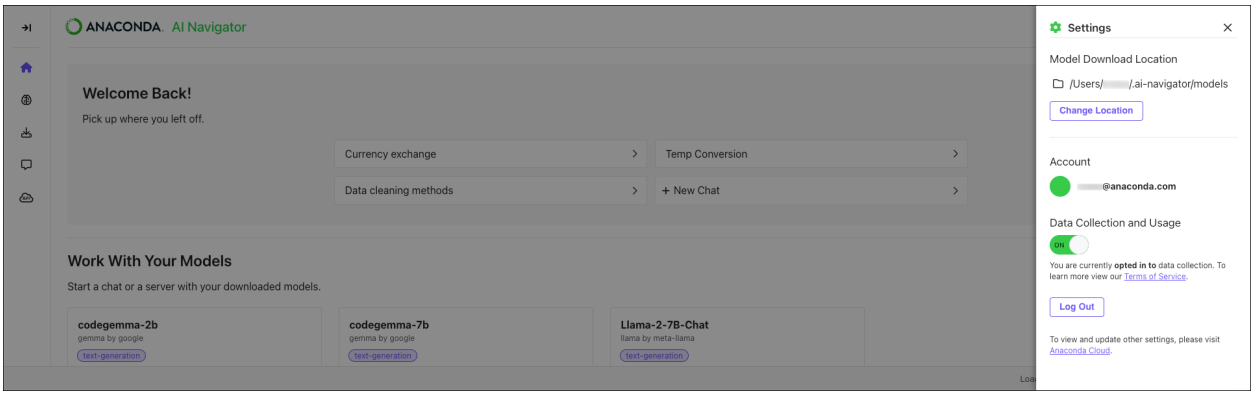
To delete a chat:

1. From the **Chat** page, open a chat's actions dropdown and select **Delete**.
2. Click **Delete Chat**.

Chat settings

Chat settings allow you to fine-tune how the model responds during user interactions.

Once you have loaded a model, click **Settings** to open the chat settings. Customize the responses from your model by adjusting the following parameters:



- **System Prompt** - Sets the overall tone and behavior for the model before any user input is provided as a prompt. The system prompt is a hidden instruction that establishes the model's persona. For example, you could instruct the model to act as a data analyst, a python developer, or to adhere to a formal tone. For more information, see *Crafting effective system prompts*.
- **Maximum Response Length** - Adjusts how long the model's responses can be. Short responses are best suited for succinct answers or summaries of information, while longer responses are better for detailed guidance.

> **Tip:** Select the **Let the model decide** checkbox to allow the model to determine when it has fulfilled the prompt request adequately.

- **Context Length** - Defines how much of the ongoing conversation the model can recall. A higher context length allows the model to keep track of more conversation history, which is beneficial for extended discussions. However, this can increase RAM usage and slow down inference, as the model processes more and more history. A lower context length can provide faster responses and reduce memory usage by considering less history.
- **Temperature** - Controls the level of randomness in the model's responses. This can help the model to feel more or less creative in its responses. A lower temperature makes the model's replies more deterministic and consistent, while a higher temperature introduces variability, allowing the model to produce varied answers to the same prompt.

Tip: Click **Reset** at the top of the **Settings** panel to return to system defaults.

Crafting effective system prompts

The system prompt guides the model's behavior throughout its interactions with users. Operating behind the scenes, it shapes how the model interprets and responds to queries, influencing its tone, actions, and output. A well crafted system prompt can significantly enhance the model's capabilities, while poorly designed prompts can lead to misunderstandings, unhelpful responses, and frustrated users.

System prompt best practices

An effective system prompt shapes how the model interacts with users, ensuring that responses are consistent and aligned with the intended behavior. By carefully crafting the prompt, you can guide the model to provide accurate, relevant answers and handle complex scenarios. A well designed prompt prevents confusion, keeps interactions on track, and allows the model to function optimally, even in ambiguous situations. Follow these best practices when establishing a system prompt:

Define the role
: Clearly specify what the model is expected to do in its interactions. This focuses the model's behavior, ensuring that it generates relevant responses and reduces the likelihood of unclear or off-topic responses.

Set the tone and style
: Choose a tone that matches the context—technical, conversational, or professional—so the model's replies align with audience expectations.

Clarify output format
: Specify how the model should present its responses. Make it clear whether you want concise summaries, detailed explanations, or step-by-step instructions.

Specify boundaries
: Define the topics or types of information the model should avoid to prevent it from sharing sensitive data, discussing confidential information, or offering legal, medical, or financial advice that should only come from authorized professionals.

Account for ambiguous situations
: Provide clear fallback instructions for handling unclear or incomplete input. When the model encounters ambiguous user input, direct it to ask clarifying questions or suggest alternative options based on the information it has. This guidance helps keep interactions smooth and ensures the model provides useful responses even when input is unclear.

Example system prompt

Here is a system prompt that takes the best practices outlined above into consideration:

> "You are a coding assistant that helps users write, debug, and optimize Python code. Respond to user queries by providing clear, step-by-step explanations and examples. Keep your tone professional and supportive, and avoid using jargon unless necessary. When suggesting solutions, ensure they follow Python best practices and are efficient. Do not provide or reference sensitive information such as API keys, passwords, or user data in your responses. If the user's input is unclear, ask clarifying questions to better understand the task."

API server

The built-in API server enables you to run open-source large language models (LLMs) locally on your own machine. It facilitates direct interaction with your models through API calls, providing a powerful tool for testing and deploying models without the need for external cloud services. By hosting your own API server locally, you have full control over the model's behavior and maintain the privacy and security of your data.

Understanding the API server

The API server is the core component of Anaconda AI Navigator that enables you to interact with your locally downloaded LLMs through API calls.

Tip: Hover over a tooltip to view information about the API Server's configurable parameters.

Server address

Your local server address, often referred to as `localhost` or `127.0.0.1`, is the default address for the API server. It is a loopback address, meaning any network communication sent to this address will stay within the same machine, keeping your data secure and private. This is common for developing applications.

If you are working in an office network and would like to make your server accessible to other devices within the same network, you can set the server address to your machine's local IP address. These are typically private networks, meaning they're not routable on the public internet.

Setting the server address to `0.0.0.0` configures it to accept connections on all network interfaces. This can expose your server to the public internet if your network is configured to allow external connections and route traffic from external sources to your server.

Server port

The server port tells the built-in API server where to listen for incoming traffic (i.e. where to listen and pick up API requests).

For more information, see Cloudflare's article on ports.

API Key

Establish an API Key that must be passed as an `Authentication: Bearer` token in the header of requests made to your server.

Testing your API Key

To test an API Key:

1. Select **API Server** from the left-hand navigation.
2. Enter your API Key in AI Navigator.
3. *Load a model into the API server*.

> **Note:** You must use a `text-generation` type model.

4. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

Anaconda Prompt

```
# Replace <API_KEY> with the value you entered into AI Navigator
curl --request POST ^
     --url http://localhost:8080/completion ^
     --header 'Authorization: Bearer <API_KEY>' ^
     --header "Content-Type: application/json" ^
     --data '{
         "prompt": "Hello, how are you?"
     }'
```

Anaconda PowerShell Prompt

```
# Replace <API_KEY> with the value you entered into AI Navigator
curl --request POST `
     --url http://localhost:8080/completion `
     --header 'Authorization: Bearer <API_KEY>' `
     --header "Content-Type: application/json" `
     --data '{
         "prompt": "Hello, how are you?"
     }'
```

Terminal

```
# Replace <API_KEY> with the value you entered into AI Navigator
curl --request POST \
     --url http://localhost:8080/completion \
     --header 'Authorization: Bearer <API_KEY>' \
     --header "Content-Type: application/json" \
     --data '{
         "prompt": "Hello, how are you?"
     }'
```

This command will reach out to the local API servers `/completion` endpoint to interact with the model you have loaded. If you receive a response, your API Key is working. If you receive a 401 error, double check your command and try again.

Viewing API server logs

To view your server logs:

1. Open Anaconda AI Navigator.
2. Select **API Server** from the left-hand navigation.

The server logs provide information for the following metrics:

- **System information** - Provides information about your system's hardware capabilities.
- **Build information** - Provides information about the version of the API server you are using.
- **Chat template** - Shows the sequence of messaging defined for the system.
- **Server listening** - Displays the server address and port number being listened to.
- **Slot information** - Displays the number of available slots for the server. Each slot is able to manage one user API request at a time.
- **Task information** - Displays information such as time spent processing and responding to a request, the request task ID, and which slot fulfilled the task.

The API server records all incoming traffic for the currently running server and displays relevant information in the **Server Logs**.

Once the server is stopped, the log is saved to `~/Library/Logs/ai-navigator` with a timestamped filename (for example `<YYYY><MM><DD><HH><MM><SS>_api-server.log`), so you can efficiently locate specific server logs if necessary.

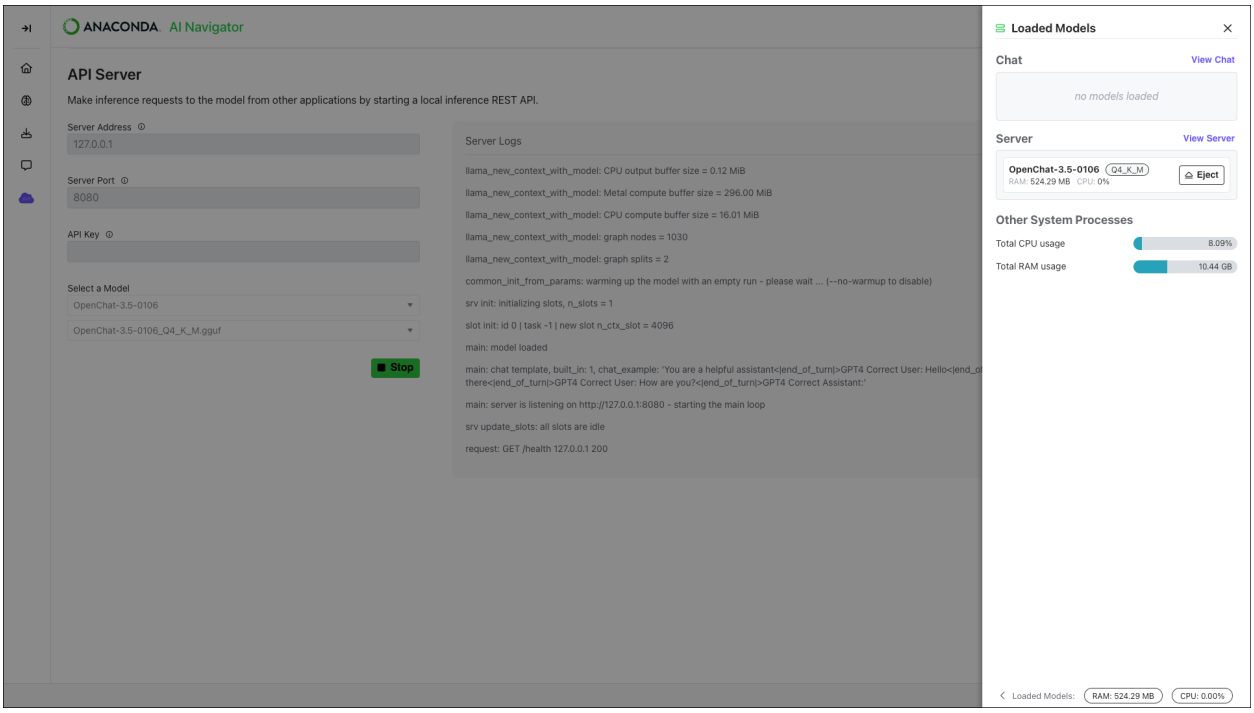
Resource consumption

Displayed at all times in the lower right-hand corner of the application, the resource consumption metrics provide real-time information about your system's CPU and RAM usage, both overall and per loaded model.

If no model is loaded into the API server or chat interface, the metrics display **No Models Loaded**. Loading a model into the API server and/or the chat interface updates the display to show you how much CPU and RAM the loaded model is currently consuming. Hover over the metrics to display:

- Additional information about how many models are currently loaded
- How much system CPU and RAM you have
- How much is being consumed by the models
- How much is dedicated to other processes (outside of AI Navigator)

Click **Loaded Models** to open the resource consumption pane. From here, you can see each model loaded into the application, along with metrics showing how many resources each model is consuming. Your system-wide resource metrics are shown below your loaded models. Click **Eject** beside a model to stop the API server or unload the chat interface and free up consumed resources. Click **View Chat** or **View Server** to open the respective view in the application.

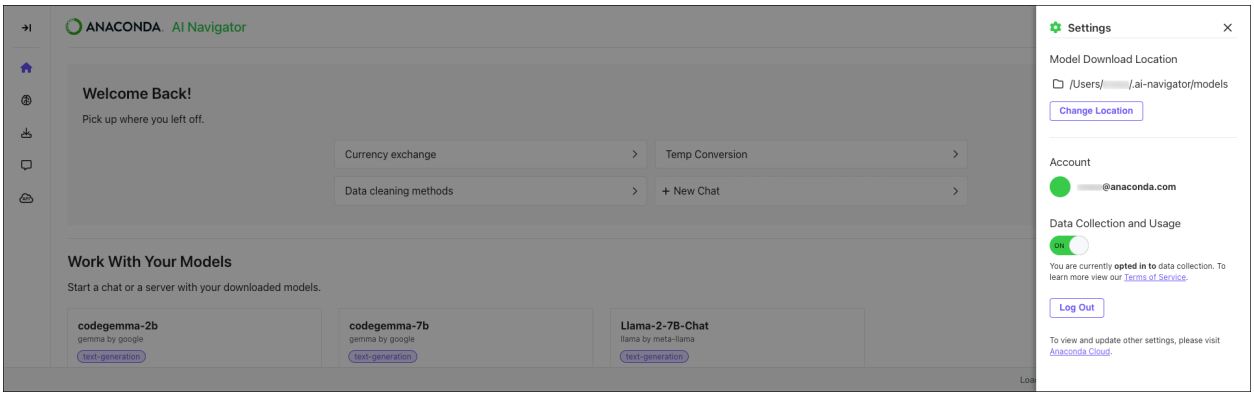


User settings

From the **Settings** pane, you can change the location of your downloaded models and log out of your Anaconda Cloud account.

To open your user settings:

1. Open the user dropdown menu in the top right corner.
2. Select **Settings**.



Tutorials

These tutorials are intended help you learn how to interact with the API server when building applications that leverage models you've downloaded using AI Navigator.

If you're more interested in creating conversational applications, check out the *Developing a chatbot tutorial*, which shows you how to interact with an AI model through an API server.

If you're new to text comparison or working with embeddings, walk through the *Comparing text using embeddings* tutorial. This guide introduces you to the basics of comparing sentences using both semantic and structural similarity.

Developing a chatbot

In this tutorial, you'll learn to build a simple chatbot in Python that utilizes Anaconda AI Navigator's built-in API server to process natural language queries. You will use conda to establish a working environment to develop the chatbot, build the API calls for the chatbot application from snippets provided, interact with the chatbot at the command line, and view the API server logs to verify the application is functioning properly.

Prerequisites

- Before you begin, ensure that you have the conda package manager installed on your machine. You can install `conda` using either *Anaconda Distribution or Miniconda*.
- You must have a `text-generation` type model downloaded onto your local machine. Walk through the *Getting started with Anaconda AI Navigator* guide before you begin the tutorial.

Setting up your environment

When working on a new conda project, it is recommended that you create a new environment for development. Follow these steps to set up an environment for your chatbot:

1. Open Anaconda Prompt (Terminal on macOS/Linux).

   > **Tip:** This terminal can be opened from within an IDE (JupyterLab, PyCharm, VSCode, Spyder), if preferred.

2. Create the conda environment for your chatbot development and install the packages you'll need by running the following command:

   ```
   conda create --name chataconda python requests
   ```

3. Activate your newly created conda environment by running the following command:

   ```
   conda activate chataconda
   ```

For more information and best practices for managing environments, see *Environments*.

Building the chatbot

Below, you'll find the necessary code snippets to build your chatbot, along with an explanation of each snippet to help you understand the functionality of the code.

Using your preferred IDE, create a new file on your machine, and name it `chatter-max.py`.

Importing libraries

The application we are building is simple, so we are only importing the `requests` package, which enables Python to make HTTP requests to the API server and receive responses.

Make this the first line of code in your `chatter-max.py` file:

```
import requests
```

Setting the `base_url`

In order for your application to programmatically process natural language inputs to generate responses, run server health checks, and perform other actions, it is crucial that you properly structure your application to interact with the API server and its endpoints.

The URLs for these API endpoints are constructed by combining a `base_url` with a specific `/endpoint` for each function. The `base_URL` can be constructed by combining the **Server Address** and **Server Port** specified in Anaconda AI Navigator, like this: `http://<SERVER_ADDRESS>:<SERVER_PORT>`.

Set the `base_url` to point to the default server address by adding the following line to your file.

```
base_url = 'http://localhost:8080'
```

Tip: `localhost` and `127.0.0.1` are semantically identical.

Adding the API calls

The most common API endpoints are described in this tutorial. For a full list of API endpoints and detailed information on how to use them effectively, see the official llama.cpp HTTP server documentation.

To enable your application to communicate with the API server, you must implement functions that make API calls in a way that the server can understand.

GET /health

Before sending any requests to the server, it's wise to verify that the server is operational. This function sends a GET request to the `/health` endpoint and returns a JSON response that tells you the server's status.

Add the following lines to your `chatter-max.py` file:

```
def get_server_health():
    response = requests.get(f'{base_url}/health')
    return response.json()
```

POST /completion

To interact with the model, you must have a function that prompts the server's `/completion` endpoint. This function sends the user input to the model loaded into the API server and receives a generated response.

The prompt construction here provides `context` to set the tone for how you would like the model to respond to your users. In essence, this is the initial prompt to the model, and it "sets the tone" for your model. We'll revisit this later.

The separation of `User:` and `Assistant:` inputs onto new lines-delineated by their respective labels-helps the model distinguish between parts of the dialogue. Without this distinction, the model will assume that the user wants it to *complete* their input, rather than *respond* to it.

The `data` dictionary is a structured collection of parameters that control how the AI model generates responses based on the user's input. These parameters dictate the model's behavior during the completion process. This is converted to JSON and sent as the body of the request.

Add the following lines to your `chatter-max.py` file:

```
def post_completion(context, user_input):
    prompt = f"{context}\nUser: {user_input}\nAssistant:"
    data = {
        'prompt': prompt,
        'temperature': 0.8,
        'top_k': 35,
        'top_p': 0.95,
        'n_predict': 400,
        'stop': ["</s>", "Assistant:", "User:"]
    }
    headers = {'Content-Type': 'application/json'}
    response = requests.post(f'{base_url}/completion', json=data,␣
↪headers=headers)
    if response.status_code == 200:
        return response.json()['content'].strip()
    else:
        return "Error processing your request. Please try again."
```

After each interaction, you'll want to update the context of the conversation to help the model produce coherent dialog. This function updates the values for `context` by appending the latest user input and the assistant's response, thus keeping the model engaged in the conversation.

Add the following lines to your `chatter-max.py` file:

```
def update_context(context, user_input, assistant_response):
    return f"{context}\nUser: {user_input}\nAssistant: {assistant_response}"
```

Constructing the chat function

The `main` function initiates the chatbot, handles user inputs, and manages the flow of the conversation. This is where you set the initial value for `context`.

Tip: Play around with the `context` to see how it impacts the responses you receive from your model!

Add the following lines to your `chatter-max.py` file:

```
def main():
    context = "You are a friendly AI assistant designed to provide helpful,␣
↪succinct, and accurate information."

    health = get_server_health()
    print('Server Health:', health)

    if health.get('status') == 'ok':
        while True:
            user_input = input("Enter a prompt or type 'exit' to quit: ")
            if user_input.lower() == 'exit':
                break
            assistant_response = post_completion(context, user_input)
            print('Assistant:', assistant_response)

            context = update_context(context, user_input, assistant_response)
    else:
        print("Server is not ready for requests.")

if __name__ == "__main__":
    main()
```

Interacting with the API server

With your chatbot constructed, it's time to take your model for a test run!

1. Open Anaconda AI Navigator and *load a model into the API server*.
2. Leave the **Server Address** and **Server Port** at the default values and click **Start**.
3. Open a terminal and navigate to the directory where you stored your `chatter-max.py` file.
4. Initiate the chatbot by running the following command:

   ```
   python chatter-max.py
   ```

5. View the Anaconda AI Navigator API server logs. If everything is set up correctly, the server logs will populate with traffic from your chatbot application, starting with a health check and the initial `context` prompt for the model.

Having some fun with the model

Try adjusting the following parameters for the `/completion` endpoint's `data` dictionary to see how they affect the output from the model.

temperature

Adjusting the temperature of your model can increase or decrease the randomness of the responses you receive from your prompts. Higher values (example `1.0`) make the output more free-flowing and creative. Lower values (example `0.2`) make the output more deterministic and focused. Defaults to `0.8`.

top_k

Limiting the `top_k` parameter confines the model's resposnse to the `k` most probable tokens. Lowering the available tokens is like limiting the words the model has to choose from when attempting to guess which word comes next. `top_k` defaults to `40`. Try setting the `top_k` to higher and lower values to see how the model responds to the same prompt.

top_p

Limits token selection to a subset of tokens with a cumulative probability above a threshold to balance creativity with coherence. Higher values allows the model to provide more creative responses, and lower values enhance focus. Adjust `top_p` to see how it affects the models descriptiveness to the same prompt. Defaults to `0.95`.

stream

Set `stream` to `true` to see the model's responses as they come in token by token. Streaming is set to `false` by default.

Next steps

You can continue to develop and extend this chatbot by including other endpoints for more advanced usage–like tokenization or slot management–or you can delete this file and clean up your conda environment by running the following command:

```
conda deactivate
conda remove --name chataconda --all
```

Comparing text using embeddings

In this tutorial, you'll learn how to create a Python application that compares two input texts using semantic embeddings and Levenshtein similarity. The application communicates with the API server to generate embeddings and calculates similarity metrics programmatically.

Embeddings are numerical representations of the meaning of a string of text. Similar strings of text will have similar numbers, and the closer numbers are together, the more closely related the topics are, even if the words are different. For example, the words "vision" and "sight" might have embeddings that are numerically close due to their similar meanings.

Prerequisites

- Before you begin, ensure that you have the conda package manager installed on your machine. You can install `conda` using either *Anaconda Distribution or Miniconda*.
- You must have a `sentence-similarity` type model downloaded onto your local machine.

Setting up your environment

When working on a new conda project, it is recommended that you create a new environment for development. Follow these steps to set up an environment for your embedding application:

1. Open Anaconda Prompt (Terminal on macOS/Linux).

   Tip: This terminal can be opened from within an IDE (JupyterLab, PyCharm, VSCode, Spyder), if preferred.

2. Create the conda environment to develop your embedding application and install the packages you'll need by running the following command:

```
conda create --name content-compare python numpy scikit-learn python-
↪Levenshtein requests
```

3. Activate your newly created conda environment by running the following command:

```
conda activate content-compare
```

For more information and best practices for managing environments, see *Environments*.

Building the text comparator

Below, you'll find the necessary code snippets to build your text comparator, with explanations for each step to help you understand how the application works. The text comparator combines two methods for comparing text: semantic similarity using embeddings, and structural similarity using Levenshtein distance.

Semantic similarity tells us how close the meanings of two texts are, while Levenshtein distance looks at how similar the actual characters are by counting the edits needed to turn one string into the other. Together, these methods help us understand how similar two text strings are—whether they look alike, mean the same thing, or both.

Using your preferred IDE, create a new file and name it `similarian.py`.

Importing libraries

The application we are building requires libraries to handle HTTP requests, numerical operations, and string similarity calculations.

Add the following lines of code to the top of your `similarian.py` file:

```
import requests
import numpy as np
from sklearn.metrics.pairwise import cosine_similarity
import Levenshtein
```

Setting the base_url

In order for the application to programmatically process text inputs to run server health checks, generate embeddings, and perform other actions, it is crucial that you properly structure your application to interact with the API server and its endpoints.

The URLs for these API endpoints are constructed by combining a `base_url` with a specific `/endpoint` for each function. The `base_URL` can be constructed by combining the **Server Address** and **Server Port** specified in Anaconda AI Navigator, like this: `http://<SERVER_ADDRESS>:<SERVER_PORT>`.

Set the `base_url` to point to the default server address by adding the following line to your file.

```
base_url = 'http://localhost:8080'
```

Tip: `localhost` and `127.0.0.1` are semantically identical.

Adding the API calls

AI Navigator utilizes llama.cpp's specifications for interacting with the API server's `/embedding` endpoint.

Tip: The API server is also compatible with OpenAI's `/embeddings` API specifications.

To enable your application to communicate with the API server, you must implement functions that make API calls in a way that the server can understand.

GET /health

Before sending any requests to the server, it's a good idea to verify that the server is operational. This function sends a GET request to the `/health` endpoint and returns a JSON response that tells you the server's status.

Add the following lines to your `similarian.py` file:

```
def get_server_health():
    response = requests.get(f'{base_url}/health')
    return response.json()
```

POST /embedding

To interact with a `sentence-similarity` model, you must have a function that hits the server's `/embedding` endpoint. This function processes input text and returns its vector representation (embedding).

Add the following lines to your `similarian.py` file:

```
def get_embedding(input_text):
    data = {"content": input_text}
    headers = {"Content-Type": "application/json"}
    response = requests.post(f"{base_url}/embedding", json=data, headers=headers)

    if response.status_code == 200:
```

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```
        return response.json()["embedding"]
    else:
        raise Exception(f"Error: {response.status_code}, {response.text}")
```

Constructing the functions

Now that we have added the API calls to communicate with the API server, we'll need to construct the core functionality of our application: comparing two strings of text. This involves measuring their semantic (meaning-based) and structural (character-based) similarities.

compare_texts

This function takes the two text inputs from the `main` function and calculates the semantic and structural similarity scores.

Add the following lines to your `similarian.py` file:

```
def compare_texts(text1, text2):
    # Get embeddings and calculate semantic similarity
    emb1 = get_embedding(text1)
    emb2 = get_embedding(text2)
    semantic_sim = cosine_similarity(
        np.array(emb1).reshape(1, -1),
        np.array(emb2).reshape(1, -1)
    )[0][0]

    # Calculate Levenshtein similarity
    distance = Levenshtein.distance(text1.lower(), text2.lower())
    max_length = max(len(text1), len(text2))
    levenshtein_sim = 1 - (distance / max_length)

    return semantic_sim, levenshtein_sim
```

main

The `main` function ties the rest of the functions together and handles user input. It takes two inputs from the user and displays the results from the similarity calculations.

Add the following lines to your `similarian.py` file:

```
def main():
    print("Enter two sentences to compare:")
    text1 = input("Sentence 1: ")
    text2 = input("Sentence 2: ")

    print("\nCalculating similarities...")

    try:
        semantic_sim, levenshtein_sim = compare_texts(text1, text2)
```

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```
        print("\nResults:")
        print(f"Semantic (embedding) similarity: {semantic_sim:.2%}")
        print(f"Levenshtein (string) similarity: {levenshtein_sim:.2%}")
    except requests.exceptions.ConnectionError:
        print("\nError: Could not connect to embedding server at localhost:8080")
        print("Make sure your local embedding server is running")

if __name__ == "__main__":
    main()
```

Interacting with the API server

With your text comparator constructed, it's time to compare some text!

1. Open Anaconda AI Navigator and *load a model into the API server*.

   Note: This *must* be a `sentence-similarity` type model!

2. Leave the **Server Address** and **Server Port** at the default values and click **Start**.
3. Open a terminal and navigate to the directory where you stored your `similarian.py` file.

   Tip: Make sure you are still in your `content-compare` conda environment.

4. Initiate the text comparator by running the following command:

   ```
   python similarian.py
   ```

   Note: You'll need to run this command every time you want to run the text comparator.

5. Enter a string of text and press Enter (Windows)/Return (Mac).
6. Enter a string of text that you want to compare to the previous string and press Enter (Windows)/Return (Mac) again.
7. View the Anaconda AI Navigator API server logs. If everything is set up correctly, the server logs will populate with traffic from the application, starting with a health check.

Here is an example of interacting with the text comparator, assuming you've previously navigated to the directory containing your `similarian.py` file:

```
(content-compare)  python similarian.py
Sentence 1: That book was amazing! I did not see that twist coming!
Sentence 2: That tome was naught but wondrous! The twist therein didst elude mine␣
↪keenest foresight.

Calculating similarities...

Results:
```

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```
Semantic (embedding) similarity: 72.61%
Levenshtein (string) similarity: 31.82%
```

Comparing sentences

Here are some examples that you can use to get a better understanding and feel for how text comparisons work:

Synonyms and rephrasing

Try writing the same phrase in two different ways to see how the semantic meaning similarity remains high, even when the structural similarity differs greatly.

```
The quick brown fox jumped over the lazy dog.
```

```
The swift auburn fox leaped above the sluggish canine.
```

Effects of typos

Experiment with minor typos to observe how semantic similarity remains consistent, while structural similarity drops due to increased edit distance.

```
The quick brown fox jumps over the lazy dog.
```

```
The quikc brn fox jumpd ovr the lazy dog.
```

Opposite meanings

Compare sentences that are structurally similar but have opposite meanings. This highlights how semantic similarity can drop even when Levenshtein similarity remains high.

```
I love dogs; they are the best.
```

```
I hate dogs; they are the worst.
```

Next steps

You can continue to develop and extend this text comparator to tackle more advanced use cases, such as implementing a database to store embeddings for efficient comparisons at scale, allowing you to build tools like duplicate content detectors, recommendation systems, or document clustering applications.

Or, if you're finished with this project, you can delete the file and clean up your conda environment by running the following commands:

```
conda deactivate
conda remove --name content-compare --all
```

Resources

Read the FAQ for help with common problems, find answers to advanced issues in the troubleshooting, or check out release notes for the latest version of Anaconda AI Navigator.

Frequently asked questions

Note: Don't see your question answered here? Let us know! Use the feedback link in the application to connect directly with the development team. Click beside your user profile to submit feedback or report a bug.

Can I control access to AI Navigator?

Yes. You can prevent your organization members from accessing AI Navigator from your organization's **Org Profile** page. For more information, see *Editing organization settings*.

Where are my application logs?

You can view the logs at the following locations:

Windows

For Windows machines, you can find the logs here: `C:\Users\<USERNAME>\AppData\Roaming\ai-navigator\logs`

macOS

For macOS machines, you can find the logs here: `~/Library/Logs/ai-navigator/`

Why am I unable to download a model?

There are multiple reasons you might not be able to download a model. Verify that you have a connection to the internet, and check the application *logs* for HTTP errors. If you are receiving a 401 error, sign out, then sign back in with your Anaconda Cloud account credentials. If that doesn't fix your issue, quit and relaunch the application and try again.

Why is my model producing garbage in chat?

The models provided with Anaconda AI Navigator are optimized at various quantization methods to make the model available for users with different hardware. Lower quantization methods have less precise responses and lower quality output than their larger counterparts.

Some models require a large amount of RAM to operate properly. If your system does not have enough resources available, your model may produce "AI hallucinations", or your system might crash completely. Verify you have enough resources before chatting with a model. If your model does produce a hallucination, delete the prompt that generated the output and try again, or open a new chat and continue working from there.

Error: couldn't bind HTTP server socket, hostname: 127.0.0.1, port: 8080

If you attempt to load a model into the API server and encounter an error ending with *couldn't bind HTTP server socket, hostname: 127.0.0.1, port: 8080*, it indicates that another process is already using the port. To resolve this, identify any running processes associated with the API server and terminate them to free up the port, or try another port.

Troubleshooting

If you're having trouble using Anaconda AI Navigator, check below to see if your issue is covered and find a solution. If you don't find the answer you're looking for, please provide feedback so we can address your specific concern and improve this guide for future users.

Model won't load (exit code 3221225781)

Cause

The model you are trying to load requires a C++ runtime environment, but Microsoft does not include one in their operating systems by default.

Solution

Install the Latest Microsoft Visual C++ Redistributable Version.

Release notes

Anaconda AI Navigator 1.10.1

Released Feb 25, 2025

Security Updates

- Mamba has been updated to version 2.0.5.
- Llama.cpp has been updated to version 0.0.4575.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.

Anaconda AI Navigator 1.9.0

Released Feb 11, 2025

Improvements

- Models that are loaded into the chat interface or API server can no longer be deleted.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.

Anaconda AI Navigator 1.8.0

Released Jan 28, 2025

Improvements

- UI improvements have been made to the resource consumption pane.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.

Anaconda AI Navigator 1.7.0

Released Jan 14, 2025

What's New?

- Resource usage metrics have been added to the application to show how much of your system's CPU and RAM is being consumed, both overall and per model.

Improvements

- The application UI has undergone further refinement for a better look and feel.
- The About AI Navigator window now shows you which version of llama.cpp and mamba are being used by the application.
- You can now adjust the application's font size using standard keyboard shortcuts: Ctrl+Plus, Ctrl+Minus, or Ctrl+0 (Windows)/Cmd+Plus, Cmd+Minus, or Cmd+0 (Mac).

Bug Fixes

- Fixed a bug that allowed users to input incorrect values in the chat settings fields.
- Fixed a bug that prevented the API server from using port 8000.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 1.6.4

Released December 17, 2024

What's New?

- Added the ability to configure an API Key for the built-in API server.

Improvements

- The authentication service has been updated to align with Anaconda Cloud services. You might need to sign in again.

Bug Fixes

- Fixed a bug that caused a blank page to appear when switching between models on Windows machines.
- Fixed a bug that caused the application to display "Unknown User" as your username temporarily after logging in.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.
- The sign-in modal might take a moment to open and close during login.

Anaconda AI Navigator 1.5.3

Released December 5, 2024

What's New?

- Added `sentence-similarity` models to the repository. These models are optimal for content comparison and contextual analysis.

Improvements

- The chat interface now displays the name of the model that generated each response.
- The chat input area has been enhanced to expand dynamically with user input.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 1.4.0

Released November 19, 2024

What's New?

- AI Navigator can now be disabled for your Anaconda Cloud organization, if necessary.

Improvements

- Improved user experience for the Chat settings panel.
- Nvidia GPU's VRAM is now taken into account when determining which models you can download and use.

Bug Fixes

- Fixed a bug that caused an `Object has been destroyed` error to display when logging in.
- Fixed a bug that caused the API server to fail with exit code 3221225501.
- Fixed a bug that caused the `useModelServer error: No running servers found for port 62643` error to appear when switching models in chat.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.
- The sign-in modal might take a moment to open and close during login.

Anaconda AI Navigator 1.3.4

Released November 6, 2024

Improvements

- Added Accessible Rich Internet Applications (ARIA) labeling to numerical application components for improved screen reader support.

Bug Fixes

- Fixed a bug that prevented model download progress from properly displaying on the **My Models** page.
- Fixed a bug that caused in progress downloads to incorrectly display a progress of zero after upgrading.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.
- The sign-in modal might take a moment to close after a successful login.

Anaconda AI Navigator 1.2.2

Released October 21, 2024

Improvements

- Converted the Temperature chat setting from incremental buttons to a slider.
- Refreshed the application UI to improve accessibility and provide a better look and feel.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.
- The sign-in modal might take a moment to close after a successful login.
- Downloads in progress during an upgrade incorrectly display a progress of zero upon application restart.

Anaconda AI Navigator 1.1.1

Released: October 7, 2024

What's New?

- Included advanced options for date filtering.

Improvements

- Implemented pre-download checks to ensure there is sufficient disk space available before initiating model downloads.
- Improved clarity for deleting models to list the file name as opposed to the model name.
- Made various improvements to the application's visual elements for consistency.

Bug Fixes

- Fixed a bug that allowed users to interact with notifications while logged out of the application.
- Fixed a bug that required users to click twice to increment the Temperature setting.

- Fixed a bug that allowed the Temperature setting to increment past `1.0`.
- Fixed a bug that prevented the "number of filters applied" count from properly updating when the date filter was applied.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 1.0.2

Released: September 30, 2024

What's New?

- Anaconda AI Navigator has moved out of beta testing and been made available to the general public.
- Included options for logging in with your GitHub or Microsoft account credentials.

Improvements

- Added the ability to clear the date filter.
- Added tooltips to the chat settings page for better user guidance.
- Added confirmation prompts when deleting a model or chat, or when canceling a download.

Bug Fixes

- Fixed a bug that allowed deleted models to still appear as downloaded, causing an error when users try to interact with them.
- Fixed a bug that prevented actions from being initiated when clicking **Start Server** or **New Chat** on the **Models** or **Downloaded Models** page.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 0.8.3 - beta

Released: September 23, 2024

What's New?

- Added settings to the Chat page to fine-tune model responses.
- Included a Net Promoter Score (NPS) survey within the application.

Improvements

- Reordered chat sessions in history to display the most recent first. The three most recent chats now appear on the home screen.
- Improved application behavior so that all open windows now close when the app is exited.
- Added the ability to filter models by publish date.
- Implemented automatic pausing of model downloads when the app is closed or exited.
- Updated the in-app survey to use a new SurveyMonkey form, replacing the previous Google Form.

Bug Fixes

- Fixed a bug that prevented the user interface from loading when users attempted to log in via SSO.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 0.7.3 - beta

Released: August 27, 2024

Critical Fixes

- Resolved a 403 error encountered by Windows users when attempting to update to the latest version of AI Navigator.
- Resolved an issue where the chat interface and API server would not function correctly for Windows users if their usernames included spaces.

Improvements

- Improved the launch speed of Anaconda AI Navigator by 300%.
- Added the **About** menu option for Windows.
- Improved UI behavior during resizing, enforcing a minimum size, and ensuring navigation controls and key menus are accessible.
- Improved the coordination of various components within AI Navigator to reduce errors.
- Added a notification to inform users when a model download has stopped due to an error.
- Added a notification to inform users that the API Server is shutting down when they attempt to exit the application with the API Server running.
- Reduced the occurrence of errors during model downloads.

Bug Fixes

- Fixed a bug that caused to the application to get stuck when users navigated away from the chat interface while a response was loading.
- Fixed a bug that prevented users from retrying a model download after it had previously failed.
- Fixed a bug that caused an error when multiple successive clicks of a model's download button occurred.
- Fixed a bug that caused plain text system formatting messages to appear within chat responses.
- Fixed a bug that caused content to shift off-screen when the left-hand navigation was expanded.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 0.6.3 - beta

Released: August 2, 2024

Critical Fixes

- Resolved an issue that broke the application's chat interface for Windows users in the `0.5.1` release. We deeply apologize for the inconvenience.

What's New?

- Added a new search function to the Models page.
- Enabled model downloads to be paused and resumed later.

Improvements

- Added tooltips to the applications API server page.
- Improved application performance for Windows users.
- Included a link to the model's Huggingface webpage in the model details view.
- Added restrictions preventing users from downloading a model if their system can't handle the model's requirements.

Bug Fixes

- Fixed a bug that caused the chat interface's auto scrolling function to fail if there was a code block in a model's response.
- Fixed a bug that prevented the application from correctly automatically updating to the latest version.
- Fixed a bug that forced macOS users to quit the application twice to exit.

Known Issues

- Some models will not start a new chat or load into the API server from the Models page. You can still load models into the chat interface and API server from their respective pages, and from the Downloaded Models page.
- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 0.5.1 - beta

Released: July 22, 2024

What's New?

- Browse models more efficiently with filters! You can filter models by purpose, language, or license!

Improvements

- Model tiles now indicate if you have downloaded any files for that model.
- Chat responses that include code or HTML now indicate which programming language is displayed, and show correct formatting and syntax highlighting.
- Tooltips have been added to model tiles and model details.

Bug Fixes

- The submit prompt button is now correctly disabled when the prompt field is empty.

- Closing the application window no longer quits the application for macOS users.

Security Updates

- Fixed security vulnerability allowing code signing bypass on Windows.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.

Anaconda AI Navigator 0.4.3 - beta

Released: July 8, 2024

Bug Fixes

- Fixed a bug that caused a 401 HTTP error when users attempted to download a model using an expired access token.

Known Issues

- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- Currently, models have the potential to generate incoherent output.
- On macOS computers, closing the application window quits the application completely.

Anaconda AI Navigator 0.4.1 - beta

Released: July 1, 2024

Initial public beta release of Anaconda AI Navigator.

Key features

- Model repository - Get secure access to Anaconda's repository of over 200 curated models available for download.
- Chat interface - Instantly interact with models you've downloaded using the application's chat interface.
- API Server - Stand up a local server and make API calls from your AI applications to verify their functionality.
- Automatic hardware acceleration on selected operating systems and hardware architectures.

Known Issues

- Currently, models have the potential to generate incoherent output.
- AI model output can never be assumed to be 100% accurate. *Always check the information provided by models*.
- On macOS computers, closing the application window quits the application completely.

2.18.11 Package Security Manager (Cloud)

Package Security Manager (Cloud) is the web application included with Anaconda's Business tier offerings. Centralize your organization's projects, secure open-source packages and libraries, and manage vulnerabilities with a private repository hosted in your cloud. Harness open-source building blocks for enterprise-grade data science.

Open Source Innovation

- Access open-source packages—such as conda, CRAN, and standard Python.
- Add custom proprietary packages to your own mirrored enterprise repository.
- Open-source packages are carefully vetted and curated in our professional repository by the experts at Anaconda.

Secure Pipeline

- Create differentiated channels that adhere to your organization's standards by filtering, managing, and securing select packages for every project.
- Control which packages your team can download and who can access them.
- Keep vulnerabilities and unreliable software out of your data science and machine learning pipeline.

Simple Workflows

- Distribute packages across user channels and give users quicker access to the open-source software they need through your dedicated server.
- Packages are delivered automatically to your workflow.

The experts at Anaconda are carefully vetting and curating CVEs so that your organization can fully leverage the power of open-source software.

Refer to our *quickstart guide* to get started!

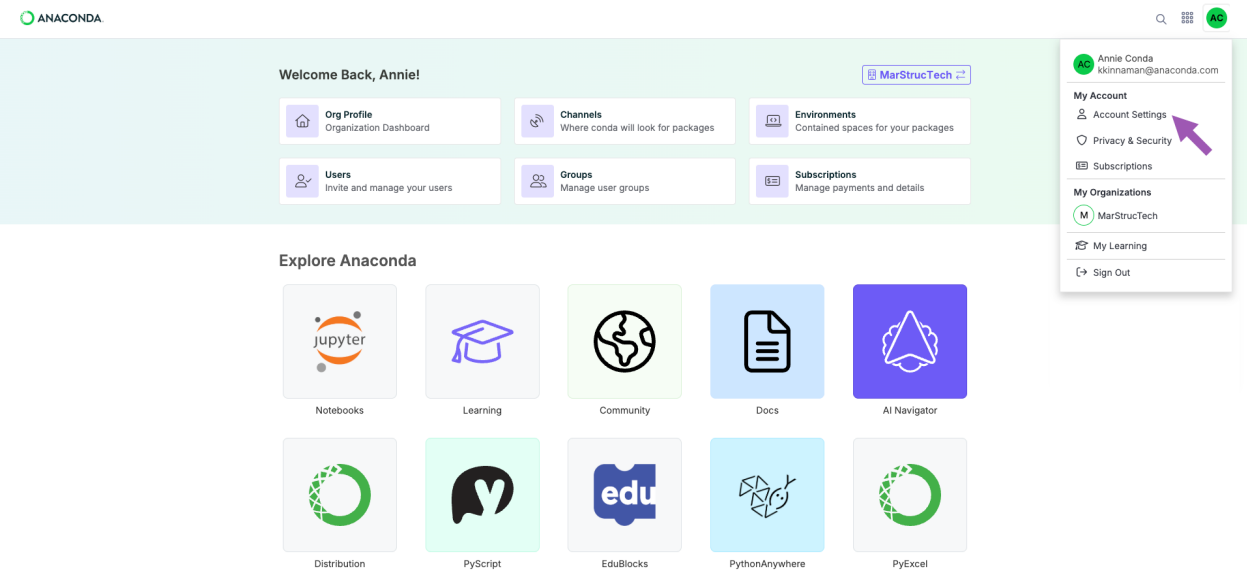
Profile Management

This topic provides guidance on managing your Anaconda Cloud account.

Accessing your profile

To view your profile at any time:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.



Changing your account email address

To update the email address associated with your account:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. Beneath your email field in the Personal Information section, click the link for changing your email.
4. Enter your new email and your current password.
5. Click **Change Email**.
6. Click **Verify and Change Email** in the email sent to your new email address.

Updating your account password

To update your Anaconda Cloud account password:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. Click **Reset Password**.
4. Check your email for the password reset email.
5. Click the password reset link in your email.
6. Enter a new password for your account.

Creating a username

Note: Setting your username is optional, but Anaconda recommends creating one if you're using the Anaconda Toolbox for Excel to sync your workspaces. Once you set a username, you cannot change it.

To create a username:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. On the **Account Settings** page, enter a username in the **Username** field.
4. At the bottom of the page, click **Save Changes**.

Updating your personal/company information

To update your personal and/or company information:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. Make the changes to your profile in the available fields.
4. At the bottom of the page, click **Save Changes**.

Adding a profile picture

You can use Gravatar to upload a profile picture for your account. Creating a Gravatar account is free. This profile picture will be linked to your email.

To set your profile picture:

1. Log in to Gravatar and select **Avatars** from the left-hand navigation.
2. Click either **Upload image** or **Use camera** to provide an image for your profile.
3. Size and crop your image as needed.
4. Click **Crop Image**.
5. Select your new avatar.

Note: You may need to refresh your Anaconda Cloud browser tab for your changes to take effect.

Managing marketing email preferences

To manage the emails you receive from Anaconda about updates, new resources, product updates, and special events within our community:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. Select **Privacy & Security**.
4. Click **Manage Email Preferences**.
5. Enter your name and email information in the fields provided.
6. Select the checkbox for the mailers you are interested in receiving.
7. Click **Update My Preferences**.

Note: If you do not want to receive marketing emails from Anaconda, select the **Unsubscribe from all marketing emails** option.

Managing your personal data

You can request access to your personal data at any time. To start the process, email us at privacy@anaconda.com. For more information about your data rights, including how and why Anaconda collects personal data, please see our Privacy Policy.

To permanently delete your account and remove your personal data:

1. Log in to Anaconda Cloud.
2. Open the user dropdown menu and select *Account Settings*.
3. Select **Privacy & Security**.
4. Click **Delete my account**.
5. Click **Delete Account** again to confirm.

Subscriptions

Subscribing to Anaconda unlocks a suite of powerful tools and resources designed to assist you with your work in Data Science and AI. Our tiered plans are designed to meet the unique needs of both individuals and organizations, offering enhanced capabilities and expert support to help you achieve more.

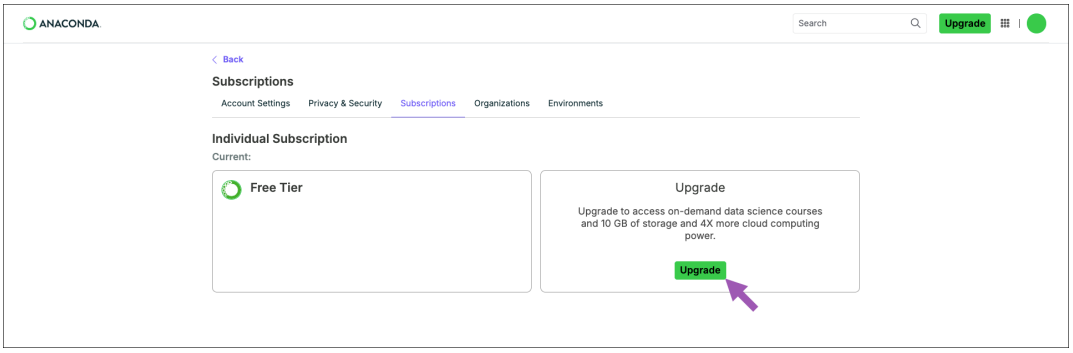
This guide walks through the process of purchasing a subscription, both as an individual and as an organization.

Purchasing an individual subscription to Anaconda

Individual subscriptions are limited to the Starter tier. For Business and Enterprise tier access, create an organization and purchase a subscription for the organization.

To purchase an individual subscription:

1. .
2. Navigate to your page.
3. Click **Upgrade**.



4. Verify your purchase details are correct and click **Continue**.
5. Enter your billing information and click **Continue**.
6. Verify that your billing information and order summary are correct, then click **Continue to payment**.
7. Enter your payment information and click **Subscribe**.

You will receive an email invoice for your subscription purchase.

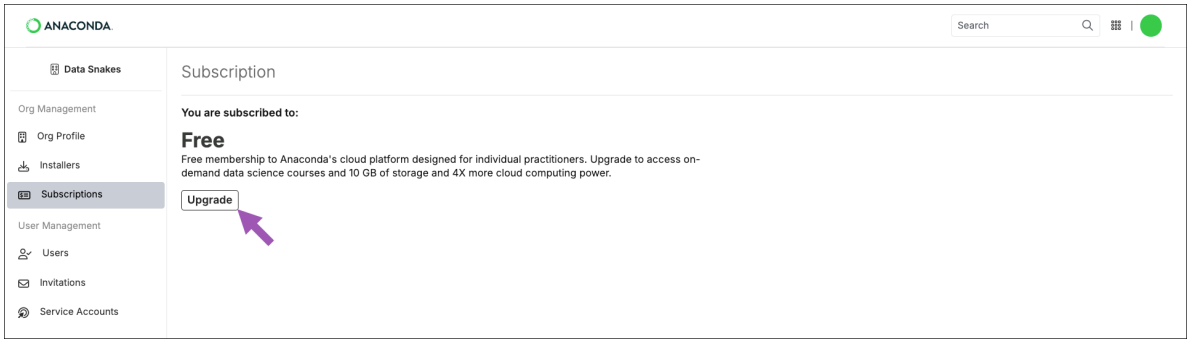
Purchasing a subscription for an organization

Caution: If you are purchasing an organization subscription, make sure you *cancel your individual subscription* if you have one to avoid duplicate billing. Organizations are distinct entities within the Anaconda ecosystem and as such, purchasing a subscription for an organization does not replace or upgrade your individual subscription.

1. .
2. Navigate to your page.
3. Select the organization you are purchasing a subscription for.

> **Note:** If you do not have an organization, click **Create Organization** and complete the steps to set up your organization profile. It's okay to skip steps two and three; you can add a description and invite members to the organization later.

4. Select **Subscriptions** in the left-hand navigation.
5. Click **Upgrade**.



6. Verify that your organization's information is correct, as shown in the purchase details.
7. Adjust the number of seats to meet the needs of your organization (this can be increased/decreased later, if necessary).
8. Click **Continue**.
9. Enter your organization's billing information and click **Continue**.
10. Verify that your billing information and order summary are correct, then click **Continue to payment**.
11. Enter your organization's payment information and click **Subscribe**.

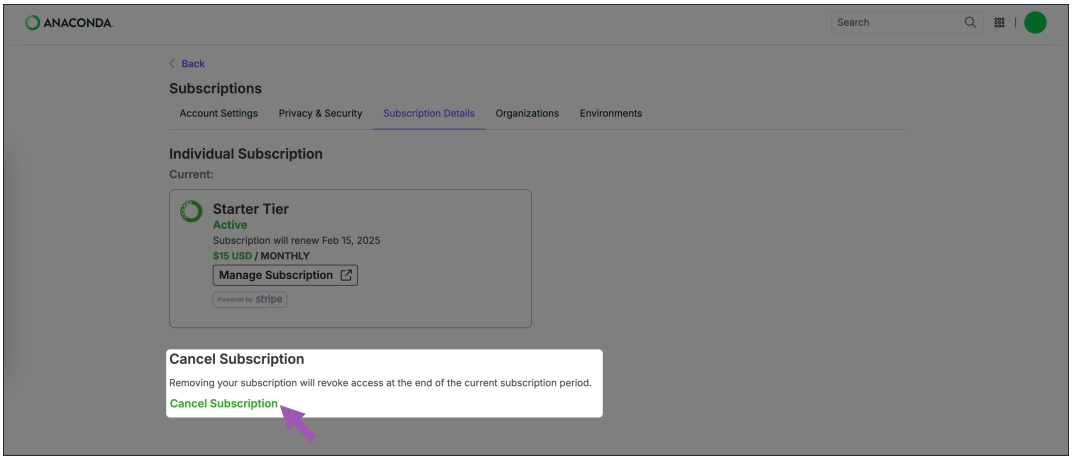
You will receive two emails. One is an invoice for your subscription purchase. The other is a welcome email for the organization you created. You can now *manage and invite members to your organization*!

Canceling a subscription

Cancel an individual or organization subscription to Anaconda using the following steps:

Individual

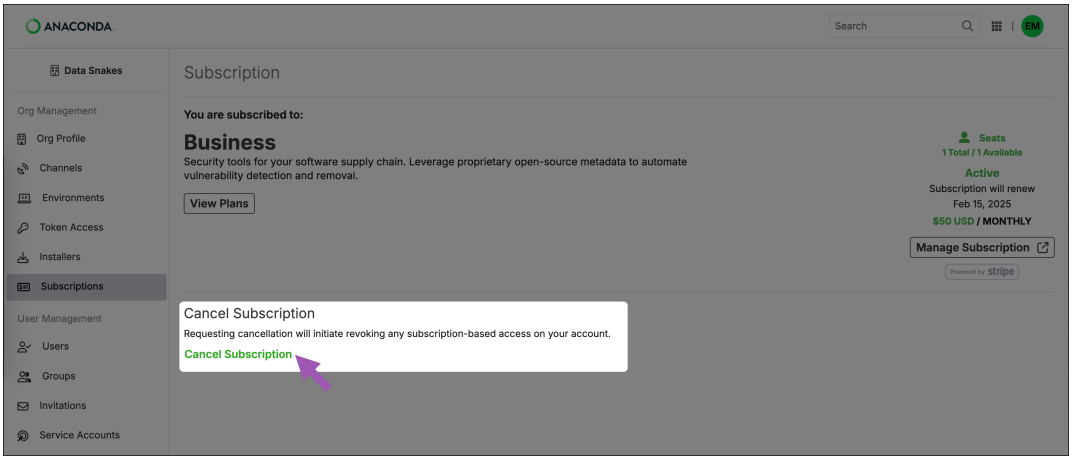
1. .
2. Open the user dropdown menu and select *Subscriptions*.
3. Click **Cancel Subscription**.



4. Click **Cancel Subscription** again.

Organization

1. .
2. Click **Subscriptions** on the dashboard.
3. Click **Cancel Subscription**.



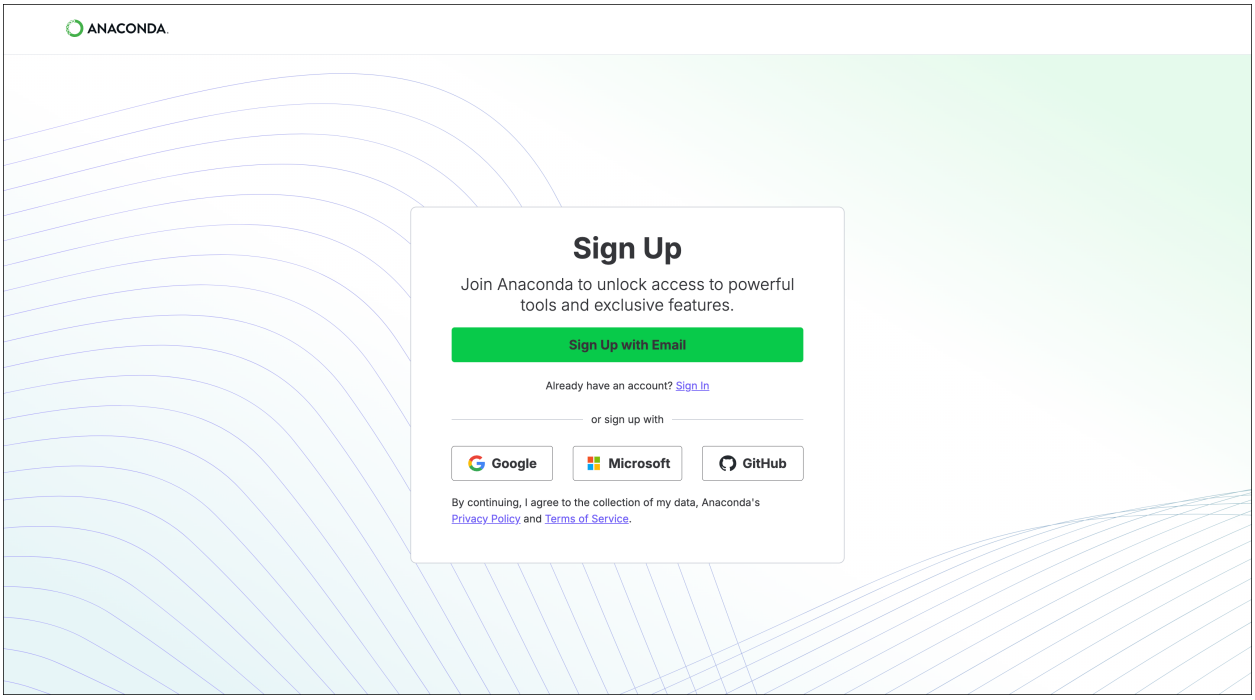
4. Click **Cancel Subscription** again.

Quickstart guide

This quickstart guide is intended to help you create an Anaconda account, obtain conda software, and configure it to access your instance of Anaconda.

Creating an account

Go to https://anaconda.cloud/sign-up.



From here you have several options for account registration:

- Sign up manually with an email and password
- Authenticate with a GitHub, Gmail, or Microsoft account

Signing up manually

1. Click **Sign Up with Email**.
2. Enter your name, email address, and password.
3. Check your email for the verification email.
4. Click the verification link in your email to complete account verification.

Subscribing to Anaconda

For information and help with managing subscriptions, see *Subscriptions*.

Installing Anaconda software

Installing conda

You can obtain conda by installing either Anaconda Distribution or Miniconda. If you already have conda installed, skip ahead to *Installing Anaconda Navigator*.

If you do not have conda installed, download either Anaconda Distribution or Miniconda and install it on your system before proceeding. If you're unsure which to download, refer to our *Getting Started with Anaconda* topic for guidance.

Installing Anaconda Navigator

Anaconda Navigator is a desktop graphical user interface (GUI) that uses conda to help you manage your environments. If you installed Anaconda Distribution, you already have Anaconda Navigator and can skip ahead to *Installing conda-token*.

If you installed Miniconda, you can install Anaconda Navigator by opening Anaconda Prompt (Terminal on macOS/Linux) and running the following command:

```
conda install anaconda-navigator
```

Tip: If you received a "conda:command not found" error, see this *troubleshooting topic to resolve the issue*.

Installing `conda-token`

The `conda-token` tool is used to authenticate your Anaconda Cloud organization access token and configure the `default_channels:` in your `.condarc` file to use Anaconda's private repository channels. For more information, see :doc:` Channels <channels>`.

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Install `conda-token` by running the following command:

```
conda install conda-token --channel https://repo.anaconda.cloud/repo/
↪anaconda-tools --name base
```

3. Enter `y` when prompted to proceed with the installation.

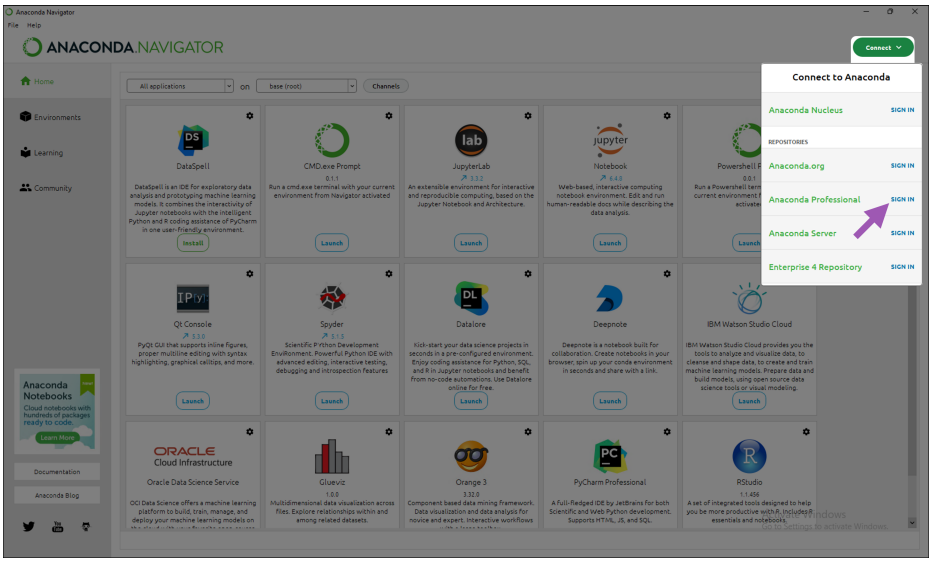
Authenticating to Anaconda

Anaconda uses private tokens to authenticate users to their organizations. You must be assigned a seat within an organization to activate a token. Once you're assigned a seat, you can generate a private token for yourself at any time.

1. Go to your organization's page.
2. Select **Token Access** from the left-hand navigation.
3. Select **Activate token** if it is the first time you are receiving a token, or **Reissue token** if you are obtaining a new token. An automated email containing a *private* token will be delivered to the address associated with your Anaconda account.
4. Copy the private token you received in your email and set it in either Navigator or the CLI:

Navigator

1. Launch Anaconda Navigator.
2. Select **Connect**, then **Sign in** to *Anaconda Professional*.



Note: Both the Pro (legacy) and Business tiers share a repository of curated packages. Therefore, signing into Anaconda Professional gives you access to the Package Security Manager channels you need, as long as you have the correct access token.

3. Paste the token, then click **Set token**.

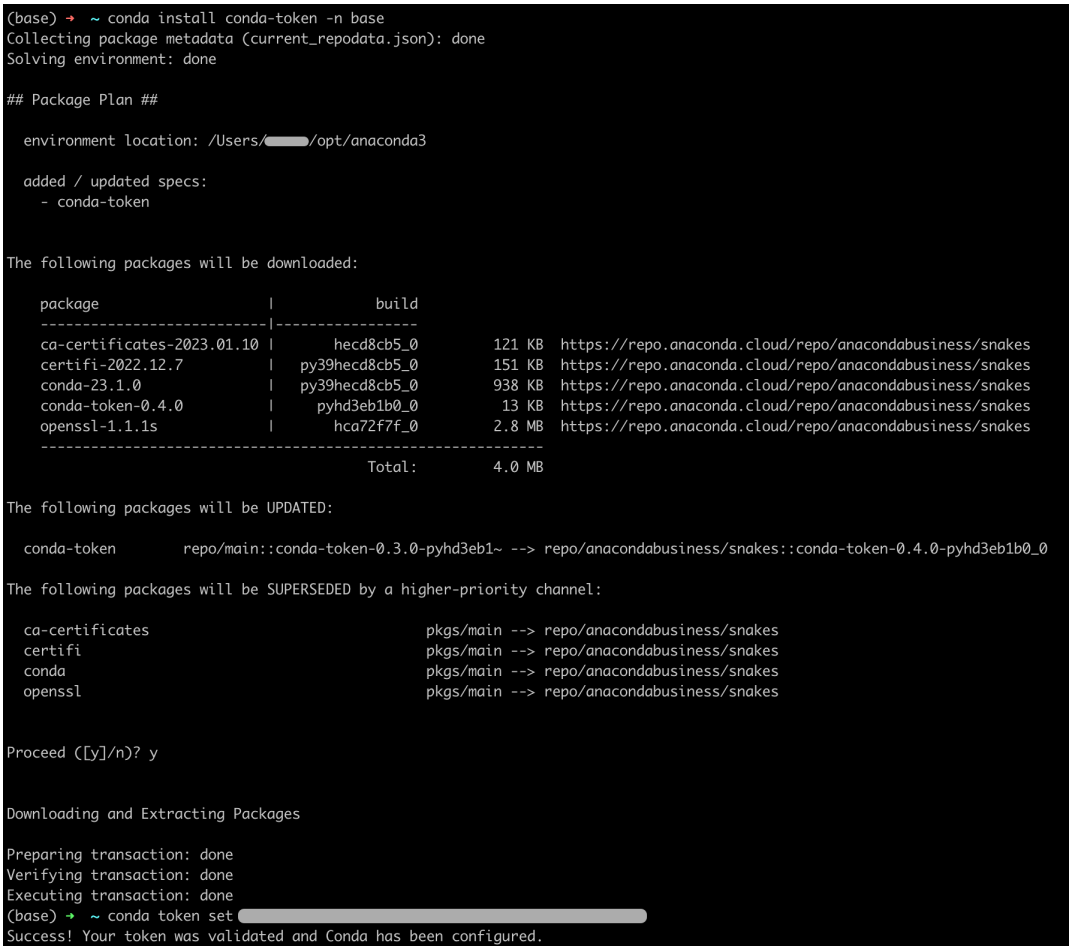
CLI

Configure conda to use this token by running the following command:

```
# Replace <TOKEN> with the token you received in your email
conda token set <TOKEN>
```

Caution: You must run this command every time you receive a new token.

Here is an example of what your terminal will display when you set your token correctly:



Important information about the .condarc file

The `.condarc` file is a configuration file that tells conda where to look for packages. Here is an example of what your `.condarc` file might look like:

```
channels:
  - https://repo.anaconda.cloud/repo/<ORG_ID>/<CHANNEL_NAME> # Business tier only
  - defaults
add_anaconda_token: true
restore_free_channel: false
default_channels:
  - https://repo.anaconda.cloud/repo/main
  - https://repo.anaconda.cloud/repo/r
  - https://repo.anaconda.cloud/repo/msys2
```

Conda searches for requested packages in the channel listed at the top of the `channels:` list first. If that channel contains the requested package, it is downloaded from that channel.

If the requested package is not located in that channel, conda will search for the package in the next entry of the `channels:` list.

When conda reaches the `defaults` entry of the `channels:` list, it searches the channels listed under the `default_channels:` list, in the same descending order.

In this example for *Business tier*, conda will look for a requested package in your organization's channel first, then will look in the default channels in listed order, starting with https://repo.anaconda.cloud/repo/main, then https://repo.anaconda.cloud/repo/r, and finally, in https://repo.anaconda.cloud/repo/msys2.

For *Pro tier (legacy)*, conda will look in the default channels in listed order, starting with https://repo.anaconda.cloud/repo/main, then https://repo.anaconda.cloud/repo/r, and finally, in https://repo.anaconda.cloud/repo/msys2.

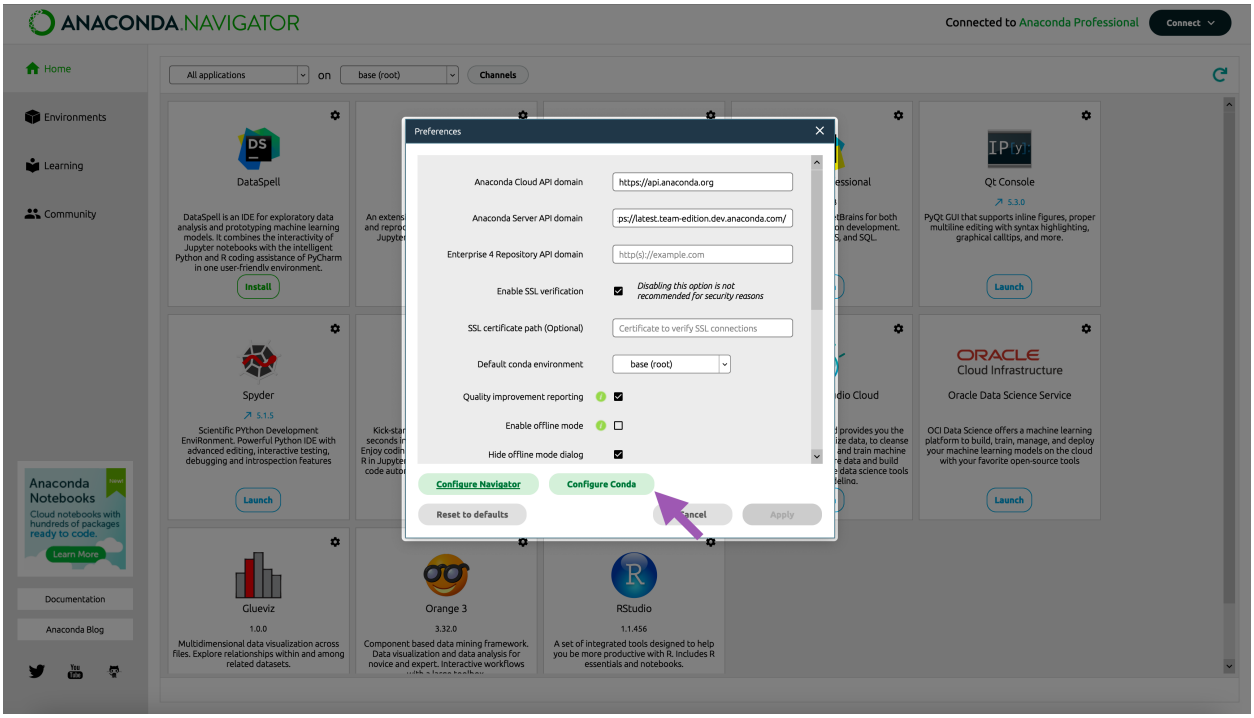
For more information regarding the `.condarc` file, see the official conda documentation.

Viewing your `.condarc` file

You can view and edit your `.condarc` file in either Navigator or the CLI:

Navigator

In Anaconda Navigator, navigate to **Preferences** from the menu bar and select **Configure Conda**.



Note: You can edit the `.condarc` file directly from this view.

CLI

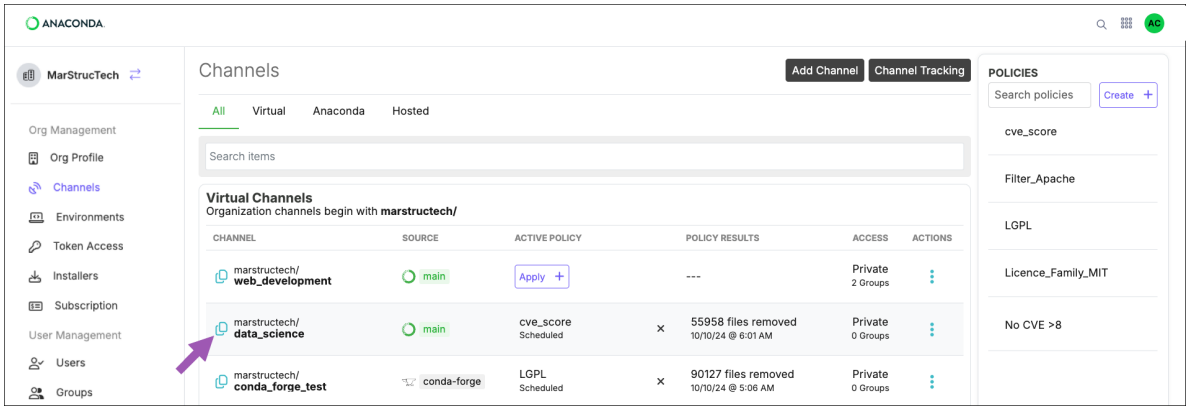
Run the following command in the terminal:

```
cat .condarc
```

Adding an organization channel to your `.condarc` file

Note: This section applies to Business tier only.

1. Go to your organization's page.
2. Select your organization.
3. Select **Channels** from the left-hand navigation.
4. Select **copy channel path**.



5. Open your terminal and run the following command:

```
# Replace <CHANNEL_PATH> with the copied channel path
conda config --prepend channels <CHANNEL_PATH>
```

Adding `conda-forge` as a channel

If you need to install packages from the `conda-forge` repository, you can do so in either Navigator or the CLI:

Navigator

1. Select **Channels**, then click **Add...**.
2. Enter `conda-forge` as your channel.
3. Press Enter (Windows)/Return (Mac) to add the channel.
4. Click **Update channels** to instruct navigator to update the `channels:` list in your `.condarc` file.

CLI

Run the following command in the terminal:

```
conda config --append channels conda-forge
```

Using Anaconda behind a firewall or proxy (Optional)

Some companies have security policies that prevent communications on their network with external servers like Anaconda. Under these circumstances, you'll need to connect to your company's firewall/proxy server in order to download packages successfully.

To connect to a firewall/proxy server, you'll need to include a `proxy_servers:` section in the `.condarc` file that contains the URL to the proxy server. This entry must also contain a username and password for logging in to the proxy server. Speak with your IT Administrator if you do not have this information.

There are no commands to include this portion of the `.condarc` file, so you need to manually include the following lines:

Caution: If your password contains special characters, you'll need to escape them using percent encoding as described here.

```
# Replace <USERNAME> with the username for your proxy server
# Replace <PASSWORD> with the password for your proxy server
# Replace <URL> with the URL to your proxy server
proxy_servers:
 http: http://<USERNAME>:<PASSWORD>@<URL>:8080
 https: https://<USERNAME>:<PASSWORD>@<URL>:8443
```

You'll also need to work with your IT team to allowlist connections to the main package repositories once you've configured your connection to the firewall/proxy server. The main package repositories are:

- https://anaconda.org
- https://repo.anaconda.com
- https://repo.anaconda.cloud

In some situations, it is necessary to export the `HTTP_PROXY` and `HTTPS_PROXY` environment variables to utilize the proxy server. To export your environment variables, open a terminal and run the following commands:

```
# Replace <USERNAME> with the username for your proxy server
# Replace <PASSWORD> with the password for your proxy server
# Replace <URL> with the URL to your proxy server
export HTTP_PROXY=http://<USERNAME>:<PASSWORD>@<URL>:8080
export HTTPS_PROXY=https://<USERNAME>:<PASSWORD>@<URL>:8443
```

For more information about using conda behind a proxy server, see Configure conda for use behind a proxy server.

Enabling environment management

Administrators can enhance organizational security by requiring members to log their local conda environments with the organization. Environments that are logged with an organization can be monitored, scanned, and blocked from use if a vulnerability is discovered. For more information about logging, scanning, and managing environments, see *Environments*.

Note: Implementing environment logging requires coordination at the organizational level.

Prerequisites

Environment logging and scanning requires the following:

- An anaconda.cloud account
- Python 3.10 or later in your `(base)` environment

Verifying Python in your `(base)` environment

Check to see which Python version you have in `(base)` by opening Anaconda Prompt (Terminal for macOS/Linux) and running the following command:

```
python --version
```

The output of the command might look something similar to this:

If you need to upgrade Python, run the following command:

```
conda update --name base python
```

Caution: Updating Python in your `(base)` environment can affect other installed packages. Review the proposed changes carefully before proceeding.

Installing required plugins

Environment logging and scanning requires the installation of a few plugins in your `(base)` environment that expand the functionality of conda.

Obtain the necessary plugins by installing the `anaconda-env-manager` "metapackage" (which contains all of the plugins listed below). To install `anaconda-env-manager`, run the following command:

```
conda install --name base anaconda-cloud::anaconda-env-manager
```

Plugins provided by the `anaconda-env-manager` metapackage

The following plugins extend the functionality of your installation of conda:

- `anaconda-env-log` - Automatically logs the current state of an environment whenever a user performs a `create`, `install`, `remove`, `rename`, or `update` action with conda (manual logging of existing environments is also supported).
- `anaconda-activate-check` - Provides checks that validate environments against administrator-defined security controls before activation and notifies users of warnings or access restrictions with guidance for resolution.
- `anaconda-audit` - Allows you to scan local environments to assess the security impact of actions like installing or updating packages, so you can proactively address potential issues without requiring administrator intervention. It also serves as a valuable tool for identifying issues when troubleshooting security concerns flagged by administrators.

Note: Once you've installed `anaconda-env-manager`, it is a good idea to keep it updated by running `conda update anaconda-env-manager` periodically.

Registering your organization

To ensure your environments are properly logged to your organization on Anaconda Cloud, you must log in via the CLI and register your organization with conda. To register your organization:

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Log in to Anaconda Cloud by running the following command:

   ```
   anaconda login --at cloud
   ```

   You will be prompted for your username and password. Enter your Anaconda Cloud credentials and complete the login process in the browser window that opens.
3. After successfully logging in, return to the command line and register your organization by running the following command:

   ```
   # Replace <ORG_ID> with your ORG_ID (found in your organization's URL -
   # https://anaconda.cloud/organizations/<ORG_ID>)
   conda env-log register --organization-name <ORG_ID>
   ```

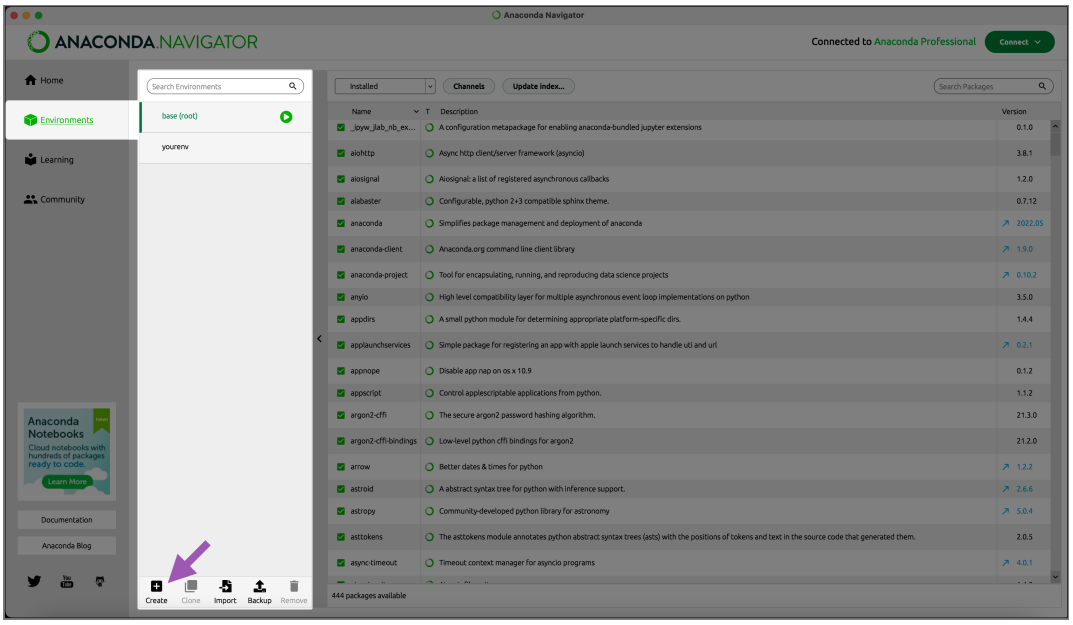
With the organization registered (and `anaconda-env-log` installed in the `(base)` environment), newly created environments are logged to the registered organization.

Verifying your configurations

Test your configurations and verify that conda downloads packages from the desired channel in either Navigator or the CLI:

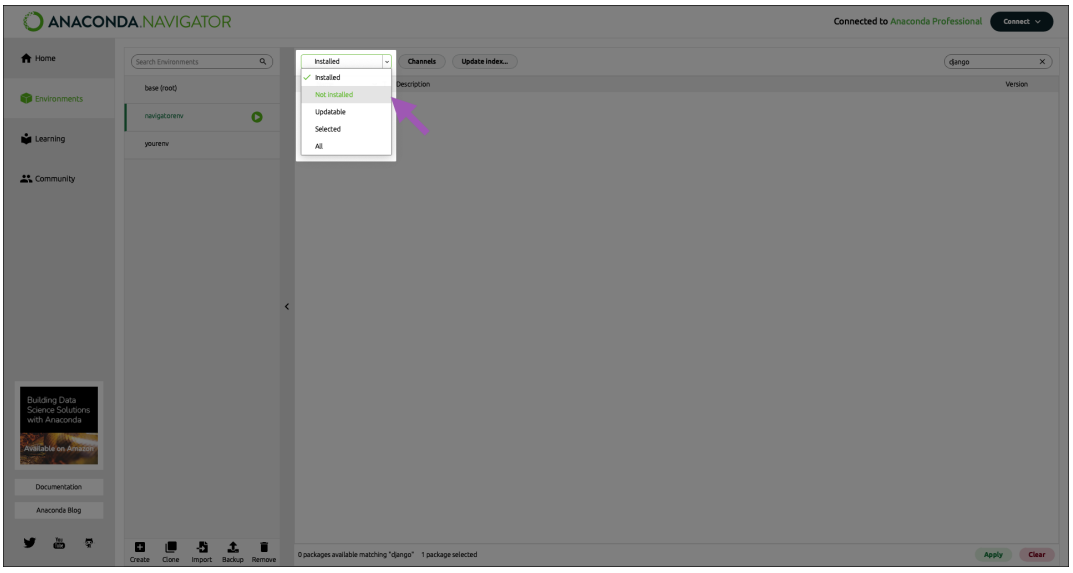
Navigator

1. Go to **Environments** in the left-hand navigation, then select **Create** at the bottom of the window.

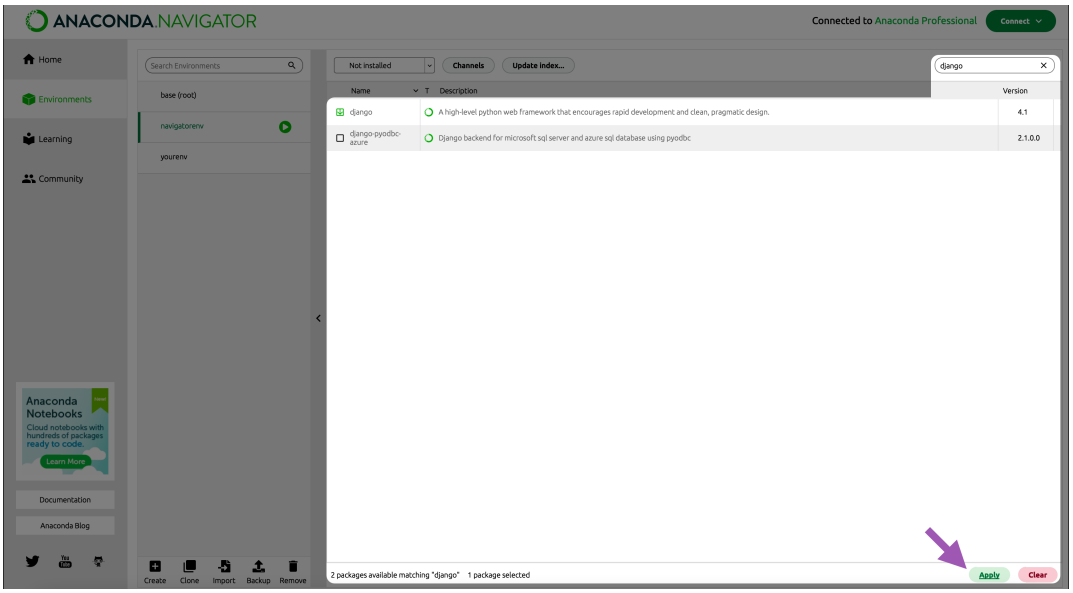


2. Enter a name for your environment and select a version of Python (3.11 is preferred) from the dropdown menu, then click **Create**.

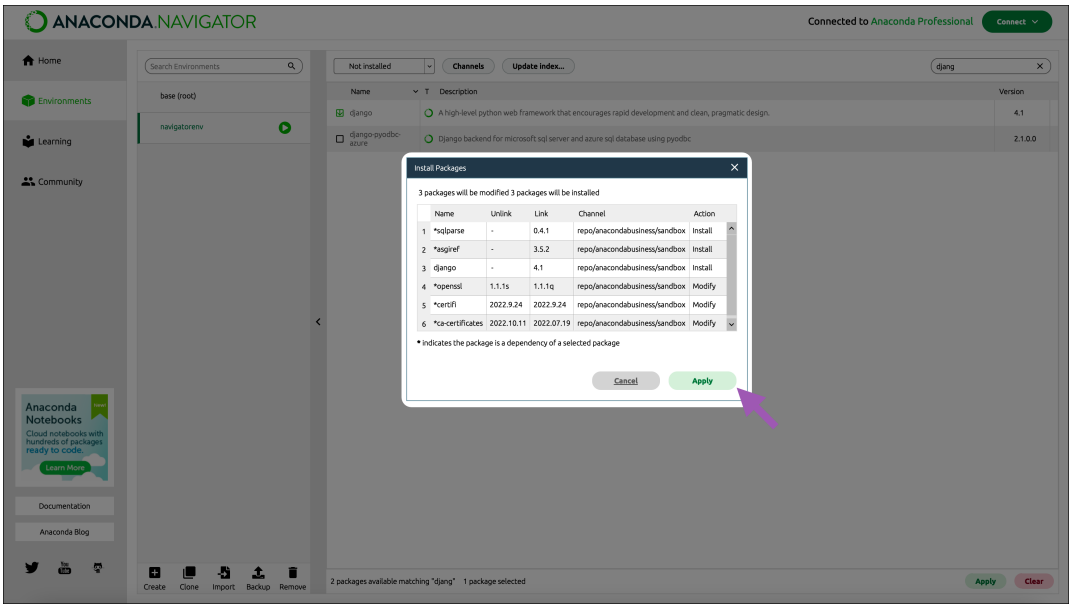
3. Change the package selector to **Not installed**. This will show you packages that are available from your channel but are not installed on your machine.



4. If you know the name of the package you need, you can enter it in the search bar to locate the package. Select a package to download and click **Apply**.



5. Click **Apply** to install the selected packages (and their dependencies).



Note: The **Channel** column will display your organization's channel path, if correctly configured.

CLI

1. Create an environment by running the following command:

```
# Replace <ENV_NAME> with a name for your environment
conda create --name <ENV_NAME>
```

2. Verify your environment created successfully by running the following command:

```
conda env list
```

3. Activate your environment by running the following command:

```
# Replace <ENV_NAME> with the name of your environment
conda activate <ENV_NAME>
```

4. Install a package by running the following command:

```
# Replace <PKG_NAME> with the name of the package you want to download from␣
↪your channel
conda install <PKG_NAME>
```

5. If necessary, you can delete the environment by running the following command:

```
# Replace <ENV_NAME> with the name of your environment
conda env remove --name <ENV_NAME>
```

Additional conda commands

The `conda info` command provides information about the currently active environment (including the location of your `.condarc` file).

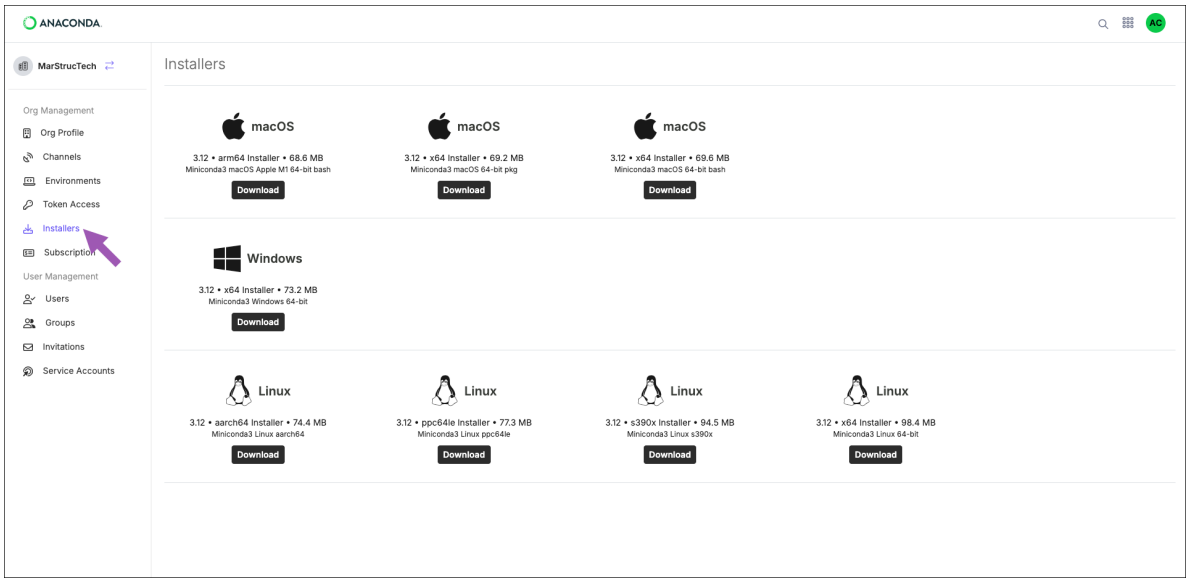
The `conda --help` command provides a list of available arguments, brief descriptions of their functions, and a list of additional commands from other packages.

This conda cheat sheet contains a list of common conda commands and brief explanations of their functions with examples.

Installers

Anaconda provides the most recent versions of Miniconda for users who need it. Miniconda is a minimal version of the Anaconda Distribution that only contains conda, python, and their dependencies.

1. From your organization's home page, select **Installers** from the left-hand navigation.
2. Find the Miniconda installer that works for your operating system (OS), then click **Download**.



Note: Anaconda Cloud prioritizes installers for your OS at the top of the page.

For information about system requirements and help installing Miniconda, see the *Miniconda documentation*.

Organizations

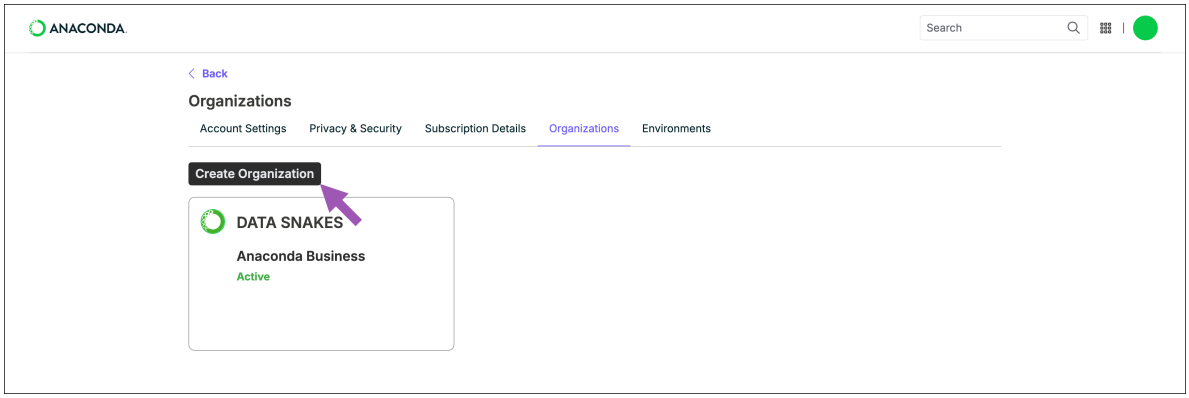
An organization is a group of Anaconda Cloud accounts with a managed set of rights and permissions. Creating an organization for your team in Anaconda Cloud allows you to:

- Provide a common collaboration space
- Ensure consistent tooling
- Manage access and costs

Note: Anaconda Cloud users can create and belong to multiple organizations.

Creating an organization

1. .
2. Navigate to your page.
3. Click **Create Organization**.



4. Follow the on-screen instructions to set up your organization. It's okay to skip steps two and three; you can add a description and invite members to the organization later.

Note:

- As the creator, you are the owner and default admin of the organization.
- The *Name of Organization* is the publicly displayed name of your organization and can be changed at any time after it is created.
- The *Organization ID* is the organization's Uniform Resource Locator (URL) identifier and must be unique. *Once the Organization ID is assigned, it cannot be changed.*

Subscribing your organization

For information and help with managing the subscription for your organization, see *Subscriptions*.

Managing large organizations

Manually adding members to your organization via the UI can be tedious when your user base numbers in the hundreds or more. Expedite the process using the Anaconda Cloud API to add users to your organization, assign them a seat, and issue them a token.

Automate onboarding your organization members using the API!

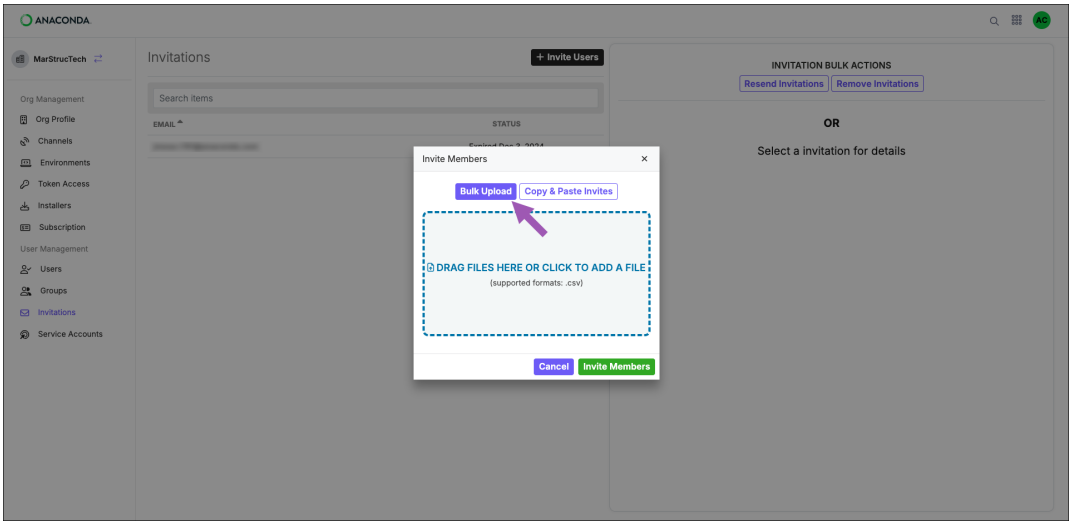
Managing organization members

Inviting members to your organization

With an organization created and multi-license subscription purchased, you are ready to invite users to your organization and assign them seats (licenses).

1. Navigate to your page.
2. Select your organization.
3. Select **Invitations** in the left-hand navigation.
4. Select **Invite Users**, enter your team member's email address, and then press tab. Repeat this process to continue adding members.

Note: Alternatively, you can select **Bulk Upload** and upload a `.csv` file containing your team members' email addresses (for larger organizations).



5. Click **Invite Members** to send the invitations.

Once you invite your member(s), they will receive an email to join the organization. Accepting the invitation in the email redirects them to the Anaconda Cloud login page. Once logged in, they can accept the invitation and join the organization.

Note: If the invited team member does not have an Anaconda Cloud account, they can create one using the email that the invite was sent to, then join the organization.

Reissuing an invitation

Invitations expire after seven days. You can reissue an invitation to a user to provide them with another seven days to accept the invitation.

Reissue individual invite

1. Navigate to your page.
2. Select your organization.
3. Select **Invitations** in the left-hand navigation.
4. Select the user you need to reissue an invitation for.
5. Click **Resend Email Invite**.

Reissue multiple invites

1. Navigate to your page.
2. Select your organization.
3. Select **Invitations** in the left-hand navigation.
4. Click **Resend Invitations**.
5. Select the checkboxes for users whose invitations you want to reissue, then click **Resend Invitations**.
6. Click **Resend** to confirm you want to reissue the invitations.

Removing an invitation

If you have invited someone to your organization in error, you can remove the invitation you sent. This also prevents the invitation recipient from being able to join your organization.

Remove individual invite

1. Navigate to your page.
2. Select your organization.
3. Select **Invitations** in the left-hand navigation.
4. Select the user whose invitation you need to remove.
5. Click **Remove Invite**.

Remove multiple invites

1. Navigate to your page.
2. Select your organization.
3. Select **Invitations** in the left-hand navigation.
4. Click **Remove Invitations**.
5. Select the invitations you want to remove, then click **Remove Invitations**.
6. Click **Remove** to confirm you want to remove the invitations.

Assigning organization seats

Once a member has accepted their invitation, you must assign them a seat (license) before they can issue themselves a token and access your org channels.

Assign individual seat

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Select the user you need to assign a seat to.
5. Click **Assign Seat**.

Assign multiple seats

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Click **Assign Seats**.
5. Select the checkboxes for users you want to assign a seat to, then click **Assign Users**.
6. Click **Assign** to confirm.

Note: Once you assign a member a seat in your organization, they will receive an email with a link to join the organization. Instruct them to open the link and go to the **Token Access** page to issue themself a token. For more information, see *Tokens*.

Changing a member's role

A user's role determines their permissions within the organization.

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Select the user whose permissions you need to change.
5. Click **Assign as Account Admin**, **Assign as Billing Manager**, or **Assign as Member**. Available options are based on the user's current role.

   Note: You must be an administrator to update user roles. Administrators cannot change their own role.

   ---

6. Confirm your role assignment to set the user's permissions.

Revoking a member's seat

If you have a user who no longer requires a seat in your organization, you can revoke their seat while retaining the user as a member of the organization. Revoking a members seat will invalidate their token and prevent them from accessing your organization channels.

Revoking individual seat

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Select the user whose seat is being revoked.
5. Click **Revoke Seat**.
6. Click **Revoke Seat** to confirm.

Revoking multiple seats

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Click **Revoke Seats**.
5. Select the checkboxes for the users whose seats are being revoked, then click **Revoke Users**.
6. Click **Revoke** to confirm.

Removing a user from the organization

If you want to remove a member from your organization completely:

1. Navigate to your page.
2. Select your organization.
3. Select **Users** from the left-hand navigation.
4. Select the user you're removing from the organization.
5. Click **Remove from Organization**.
6. Click **Remove User** to confirm.

Purchasing additional seats

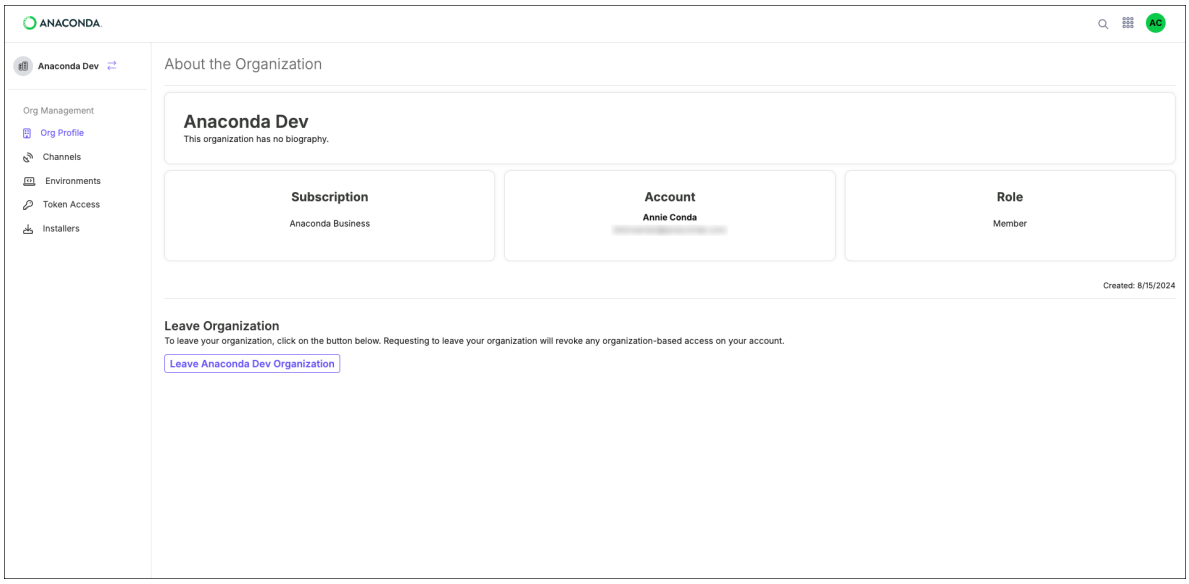
You can purchase additional seats for your organization at any time.

1. Navigate to your page.
2. Select your organization.
3. Select **Subscription** from the left hand navigation.
4. Click **Manage Subscription** to purchase additional seats.

Leaving an organization

To leave an organization you're a member of:

1. Navigate to your page.
2. Select your organization.
3. Click **Leave <ORG_NAME> Organization**.



Note: Users with the administrator role cannot leave the organization.

Editing organization settings

Organization administrators are provided with some control over the access their members have to Anaconda Cloud assets, ensuring that members have appropriate access to the tools and data they need, while safeguarding sensitive information by restricting access where necessary.

1. Navigate to your page.
2. Select your organization.
3. From the **Org Profile** page, click **Edit Organization Settings** beside the organization name.
4. Toggle settings `ON` or `OFF` as needed.

5. Click **Save Changes**.

Available organization settings

- **AI Navigator** - Controls your organization members' ability to access AI Navigator.
- **Cloud Notebooks** - Controls your organization members' ability to access Cloud Notebooks.

> **Caution:** Blocking access to these Anaconda Cloud assets prevents your organization members from using them completely, even when working outside of your organization.

Groups

> **Caution:** Groups are only available to Business or Enterprise tier customers.

Groups are tools used to manage organization members' access to channels. Assigning a channel to a group makes it private, allowing access only to members of that group.

Finding your groups

1. Log in to Anaconda Cloud.
2. Navigate to your page.
3. Select your organization.
4. Select **Groups** in the left-hand navigation.

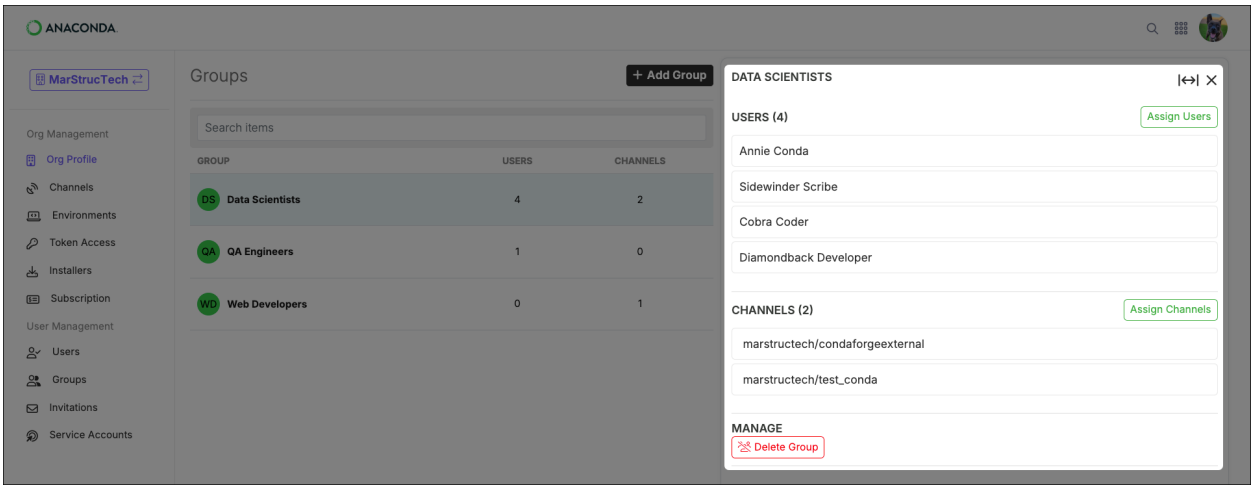
Creating a group

1. From the **Groups** page, click **Add Group**.
2. Enter a unique name for your group and click **Save**. A notification will appear to inform you that your group was successfully created, and your new group will appear in the **Groups** list.

Note: You can create as many groups as you need for your organization.

Managing groups

From the **Groups** page, select a group to open its management panel. Use the panel controls to manage the users and channels assigned to the group, or delete it.



Note:

- Assigning users to a group grants them access to view and use the channels it contains.
- Removing a user from a group removes that user's access to the private channels it contains. The user will still have access to your organization's internal channels.
- If you remove all users from a group, the channels it contains are only be visible to administrators.
- Assigning a channel to a group changes the permissions of the channel from internal to private. For more information about channel permissions, see *Channels*.

Common Vulnerabilities and Exposures (CVEs)

Caution: CVE information is only available to Business or Enterprise tier customers.

What are CVEs?

CVEs are weaknesses in software that can be exploited to access sensitive information, such as credit card numbers or social security numbers. Because modern software is complex with its many layers, interdependencies, data inputs, and libraries, vulnerabilities tend to emerge over time. Knowing when and how the code you use is vulnerable to attacks is a powerful tool in allowing you to mitigate the potential for harm, and Anaconda provides you with everything you need to keep your pipeline secure.

To learn more about CVEs and how Anaconda mitigates and manages them, watch the State of Data Science webinar.

Why trust Anaconda?

Anaconda regularly pulls its CVE databases from the National Vulnerability Database (NVD) and the US National Institute of Standards and Technology (NIST) to minimize the risk of vulnerable software in our applications and web pages. Anaconda has an extensive and well-established process for curating CVEs, assessing whether or not packages Anaconda built are affected by any CVEs, determining which versions in our repository are affected, and mitigating the vulnerability.

Understanding CVEs

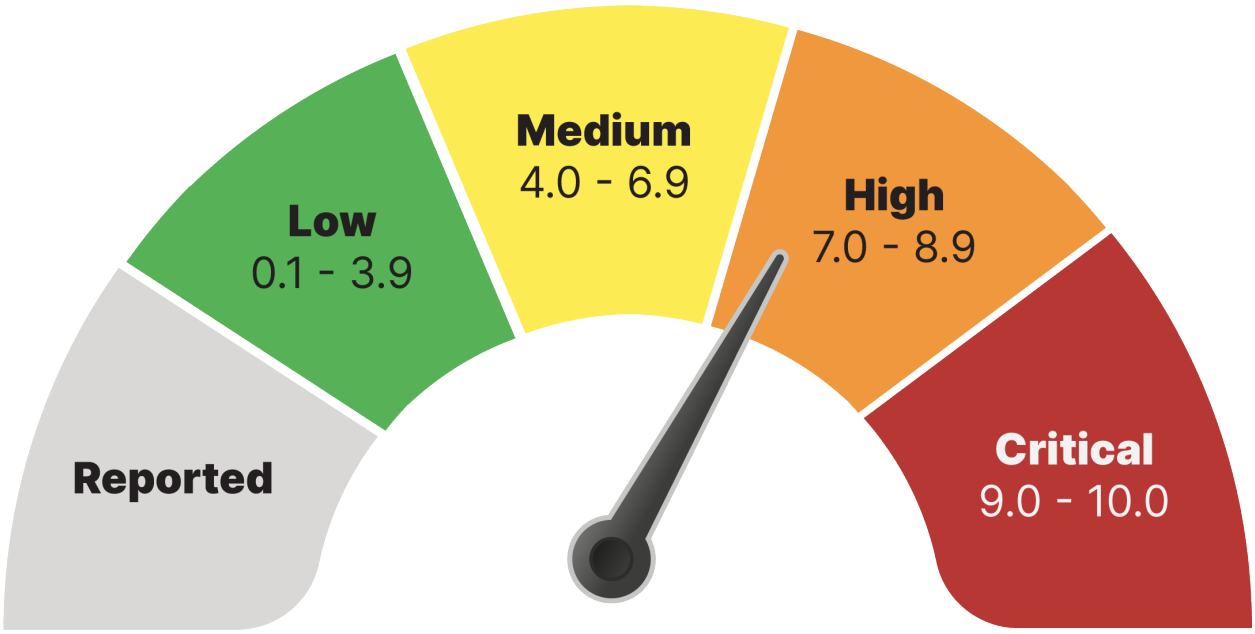
Here's what you need to know to make the right decisions regarding CVEs for your organization:

Common Vulnerability Scoring System (CVSS)

Standards for determining the severity of a CVE have evolved over time. The Common Vulnerability Scoring System (CVSS) is a mathematical method dating back to 1999 that grades the characteristics of a vulnerability. CVSS 2 was developed and launched in 2007. It was later updated to CVSS 3 in 2015 to offer a more comprehensive scoring method that accurately reflects the severity of vulnerability in the real world.

CVE scores

Software developers refer to CVE databases and scores to minimize the risk of using vulnerable components (packages and binaries) in their applications or web pages. CVE scores and ratings fall into one of 5 categories:



CVE statuses

CVEs are assigned a status category as a result of the Anaconda curation process. CVE status categories include:

- **Reported** - The vulnerabilities identified in this package have been reported by NIST but not reviewed by the Anaconda team.
- **Active** - The vulnerabilities identified in this package are active and potentially exploitable.
- **Cleared** - The vulnerabilities identified in this package have been analyzed and determined not to be applicable.
- **Mitigated** - The vulnerabilities identified in this package have been proactively mitigated in this build through a code patch.
- **Disputed** - The vulnerabilities' legitimacy is disputed by upstream project maintainers or other community members.

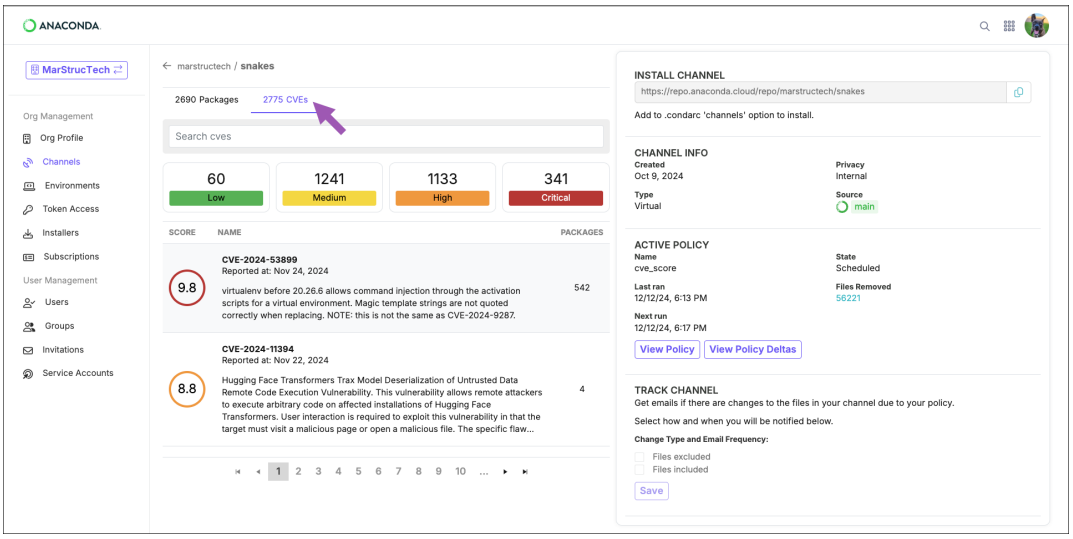
Viewing CVEs

Note:

- Not all CVEs present in a package apply to every file within that package.
- Files can be associated with multiple CVEs.

Channel CVEs

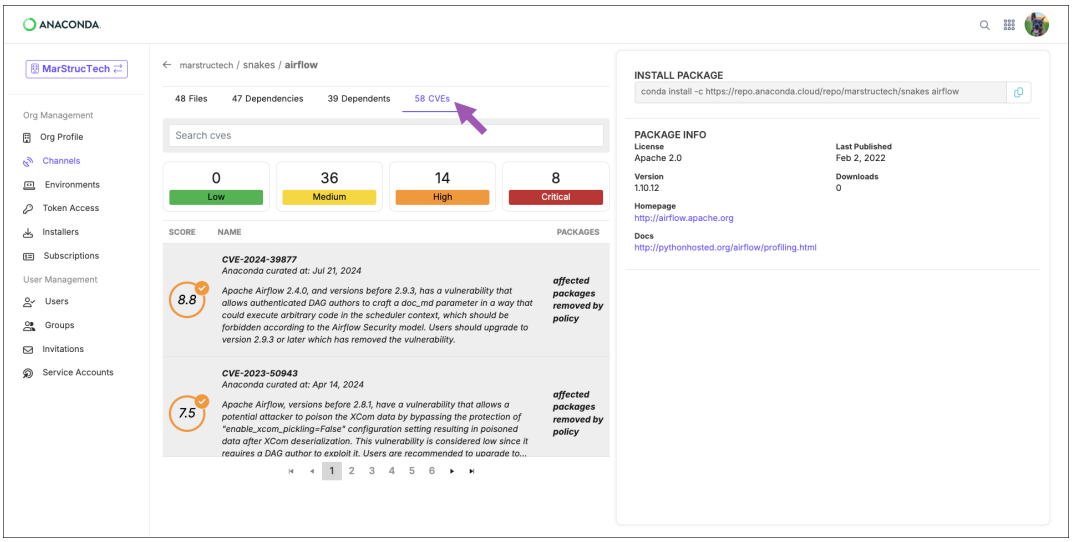
1. From the **Channels** page, select a channel to view its packages.
2. Select the **CVEs** tab to view a full list of CVEs present in the channel. A summary of how many CVEs are associated with packages in the channel and the CVEs' severity levels are displayed at the top.



Tip: Use the navigation controls at the bottom to browse CVEs associated with packages in the channel.

Package CVEs

1. From the **Channels** page, select a channel to view its packages.
2. Select a package from the list.
3. Select the **CVEs** tab to view a list of CVEs associated with the package. A summary of how many CVEs are associated with package and their severity level is displayed at the top.

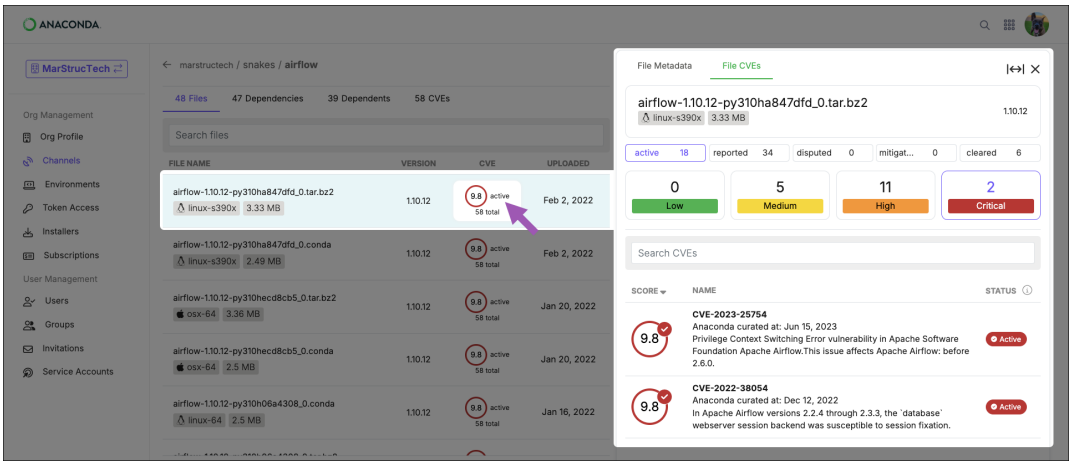


Tip: Use the navigation controls at the bottom to browse CVEs associated with the package.

File CVEs

1. From the **Channels** page, select a channel to view its packages.
2. Select a package from the list.
3. Click the CVE score displayed beside the package file to view a list of CVEs associated with the file.
4. Use the filters at the top to adjust the displayed CVEs.

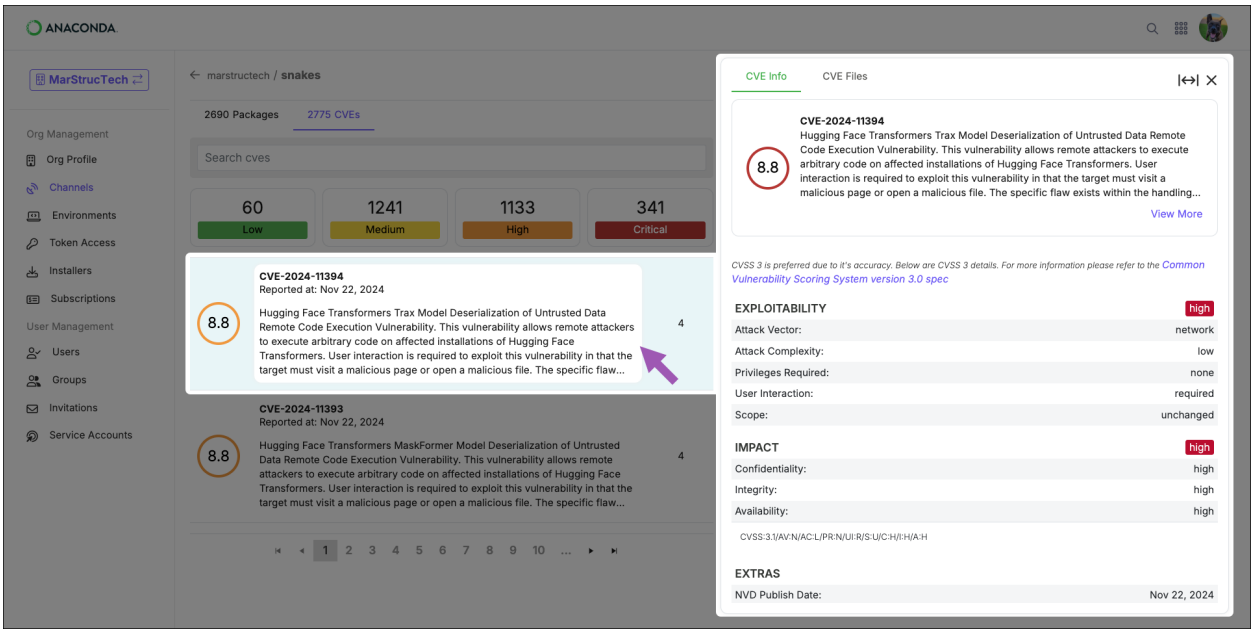
Note: The `active` filter is applied by default.



Tip: Search for a CVE by entering its name into the **Search cves** field. If no matches are returned, the CVE does not affect the channel/package/file.

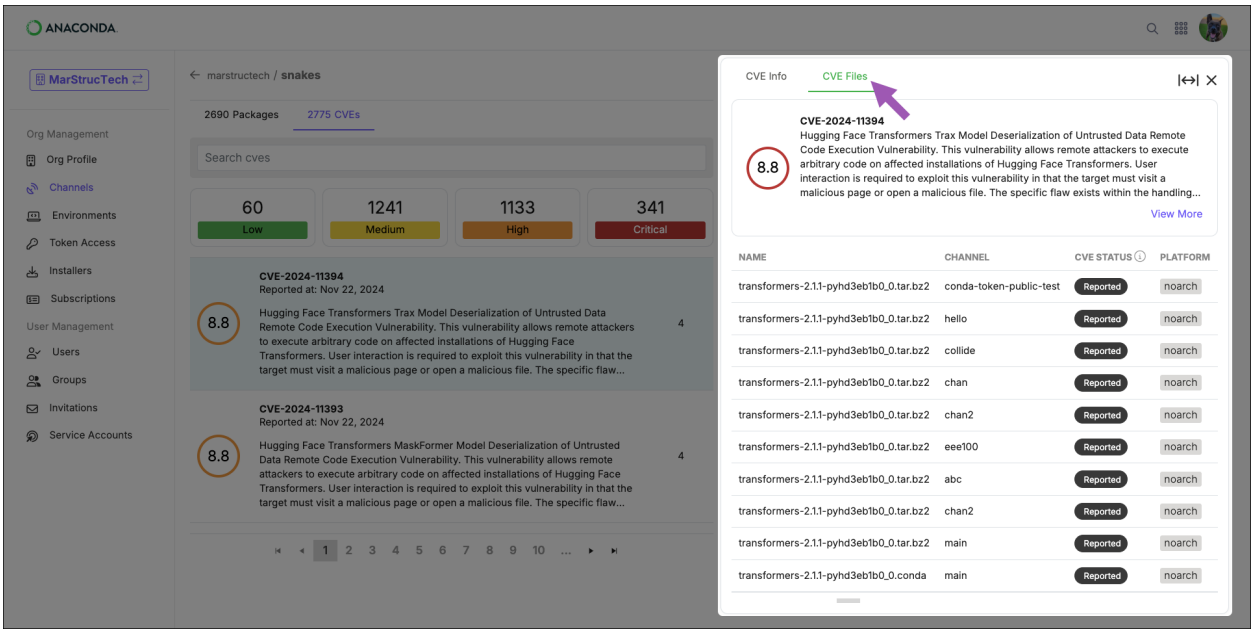
Viewing CVE information

Select a CVE from the Channel or Package **CVEs** lists to open the CVE Information panel. Here you can view a brief overview of the vulnerability with notes that were created during the Anaconda curation process, as well as its CVSS 2/CVSS 3 score metrics.



Tip: Click to expand the CVE Information panel to full screen.

Select the **CVE Files** tab to view information for every occurrence of the CVE across all channels within the organization.



Tokens

A token is a string of randomized characters that is used to identify users within Anaconda. Your token provides you with access to your subscription tier's capabilities and features within Anaconda Cloud.

There are two types of tokens used by Anaconda:

- **Organization access token** - Your organization token provides you with the ability to connect to your organization's channels to download packages. Each user in an organization has a unique token. Your organization access token expires either 30 days after your organization's subscription has ended or immediately when your subscription is canceled. If you have no valid token, you will not be able to access the channels within your organization in order to download packages.
- **Service account token** - Service accounts allow you to interact with your organization using the Anaconda Cloud API. Generating a service account provides you with both a unique client ID and client token. For more information, see *Service accounts*.

Issuing/reissuing a token

You must be assigned a seat within an organization to issue yourself a token. Once you're assigned a seat, you can generate a new organization token for yourself at any time.

1. Go to your organization's page.
2. Select **Token Access** from the left-hand navigation.
3. Click **Activate token** if it is the first time you are receiving a token, or **Reissue token** if you are obtaining a new token. An automated email containing a *private* organization token will be delivered to the address associated with your Anaconda account.

Note: Re-issuing your token will invalidate the previous token. All newly generated tokens are set to expire when your organization's subscription expires.

Synchronizing your token

Renewing your subscription does not extend the lifespan of your token. If you have renewed your subscription and want to retain your current token, synchronize your token to extend its lifespan to your organization's new subscription expiration date.

To synchronize your token:

1. Go to your organization's page.
2. Select **Token Access** from the left-hand navigation.
3. Click **Sync token**.

Setting your token

After issuing yourself a token, you must configure conda to use it to access your organization's channels. There are two main methods for setting your token for use. Choose the option that best suits how you work.

Setting your token using the CLI

Setting your token using the CLI requires the `conda-token` package. If you do not have this package, you can use conda to install it.

1. Open Anaconda Prompt (Terminal on macOS/Linux). You should see `(base)` preceding the command line. This means you are in your base conda environment.
2. Install `conda-token` by running the following command:

```
conda install conda-token --channel https://repo.anaconda.cloud/repo/anaconda-tools␣
↪--name base
```

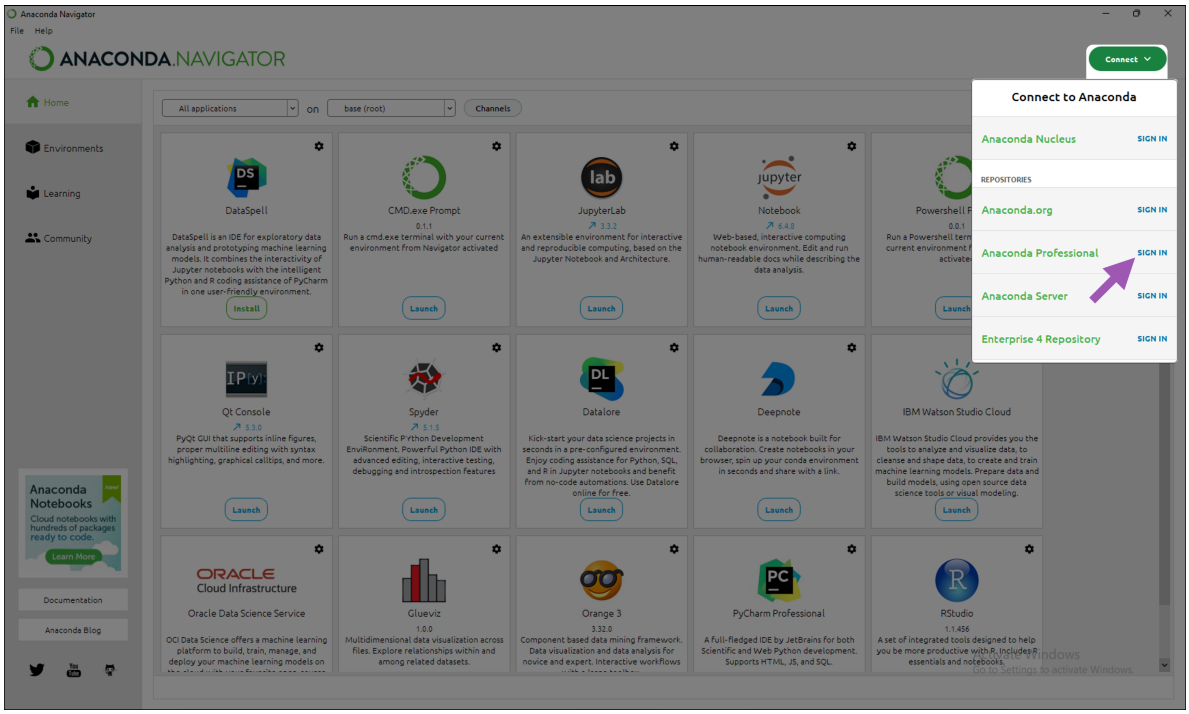
3. Enter "y" when prompted to proceed with the installation.
4. Once `conda-token` is installed, run the following command:

```
# Replace <TOKEN> with the organization token you received in your email
conda token set <TOKEN>
```

> **Caution:** You must run this command every time you receive a new token.

Setting your token using Navigator

1. Launch Anaconda Navigator.
2. Select **Connect**, then **Sign in** to *Anaconda Professional* using the organization token you received in your email.



Note: The Pro (legacy) and Business tiers share a repository of curated packages. Therefore, signing into Anaconda Professional gives you access to the Package Security Manager channels you need, as long as you have the correct access token.

Site tokens

A site token is an organization access token that is *used by the entire organization*. This one access token can authenticate any organization member to the curated Anaconda repository and your organization's channels (Business tier). Site tokens are issued/reissued and synced in a manner similar to individual access tokens, though only administrators have permission to issue/reissue a site token, and no email is issued to deliver the token; instead, your site token displays in the browser.

Save your token somewhere secure! Once you close the window, the token is no longer accessible. Distribute this token to your organization members in a secure fashion. Users no longer need to be assigned a seat in your organization to use your organization's site token.

Caution: Reissuing a site token invalidates the previous token. The new token needs to be distributed to all organizaton members and they must set the new token to regain access to the curated Anaconda repository and your organization's channels.

If you are interested in purchasing a site token, please contact Anaconda at sales@anaconda.com.

Channels

What is a channel?

A channel is a location (a URL) where conda can search for packages to install on your machine. When you authenticate to Anaconda Cloud for the first time using your organization access *token*, conda is automatically configured to use Anaconda's private repository channels. These channels are curated with *Common Vulnerability and Exposure (CVE)* information for each package.

After your initial authentication, you should see the following `default_channels:` in your `.condarc` file:

- main - https://repo.anaconda.cloud/repo/main
- r - https://repo.anaconda.cloud/repo/r
- msys2 (Windows) - https://repo.anaconda.cloud/repo/msys2

Channel types

Anaconda channels
: The Anaconda channels connect to the repository that is curated and maintained by Anaconda. These channels provide you with thousands of the most popular data science platform packages available today. It is possible to apply a policy filter to the Anaconda channels. That policy filter will not affect Organization channels that are created from the same source Anaconda channel.

Virtual channels
: Your organization's channels are virtual copies of the Anaconda channels. You can apply a policy filter to a channel to restrict the packages that are available through that channel, which customizes its contents, making it unique. For example, you can have two channels that both pull from the Anaconda `main` channel, but the available packages they provide can be different due to the policy filter that have been applied to the channels.

External channels
: External channels will point to a location (a URL) that is outside of Anaconda to look for packages.

Hosted channels
: Anaconda hosts several additional channels that are available for your organization to subscribe to. Speak to your dedicated customer success manager for assistance with subscribing to hosted channels.

  - **conda-forge** - The conda-forge channel compiles conda recipes and packages built and maintained by the open-source community. Though this channel is not proprietary to Anaconda, you can still apply a policy filter to it using Package Security Manager. However, because these packages are not built by Anaconda, they do not include the *package signature*, and all *CVE statuses* show as `Reported`.

Note: You cannot apply *policy filters* to external channels. Currently, Anaconda only supports connection to external channels located at https://conda.anaconda.org/, but we plan to support any URL soon.

Channel permissions

There are two levels of permissions associated with channels in Anaconda: *internal* and *private*.

Internal channels
Internal channels are visible to all members of your organization who have been assigned a seat.

Private channels
Private channels have their contents restricted to those members who are part of the group the channel is assigned to. For more information about assigning channels to a group, see *Groups*.

Creating an organization channel

1. From the **Channels** page, click **Add channel** to open the Create Channel dialog.
2. Enter a unique channel name.
3. Select a channel type.
4. Select a source channel from the **Source** dropdown or enter the address for your external source channel.
5. Set the permission level for the channel.
6. Click **Save**.

Your new channel will appear on the **Channels** page.

Note: If you set the channel permission level as private, you will also be prompted to add the channel to a group. If you do not wish to add the newly created private channel to a group, click **Cancel** in the Assign Groups to Channel dialog.

Assigning channel permissions

You can change the permissions level of a channel at any time:

1. From the **Channels** page, open the actions dropdown beside the channel.
2. Select either *Make Channel Internal* or *Make Channel Private*. (Your available option depends on the current permissions level of the channel.)

Note: Private channels that are not assigned to a group are only visible to organization administrators.

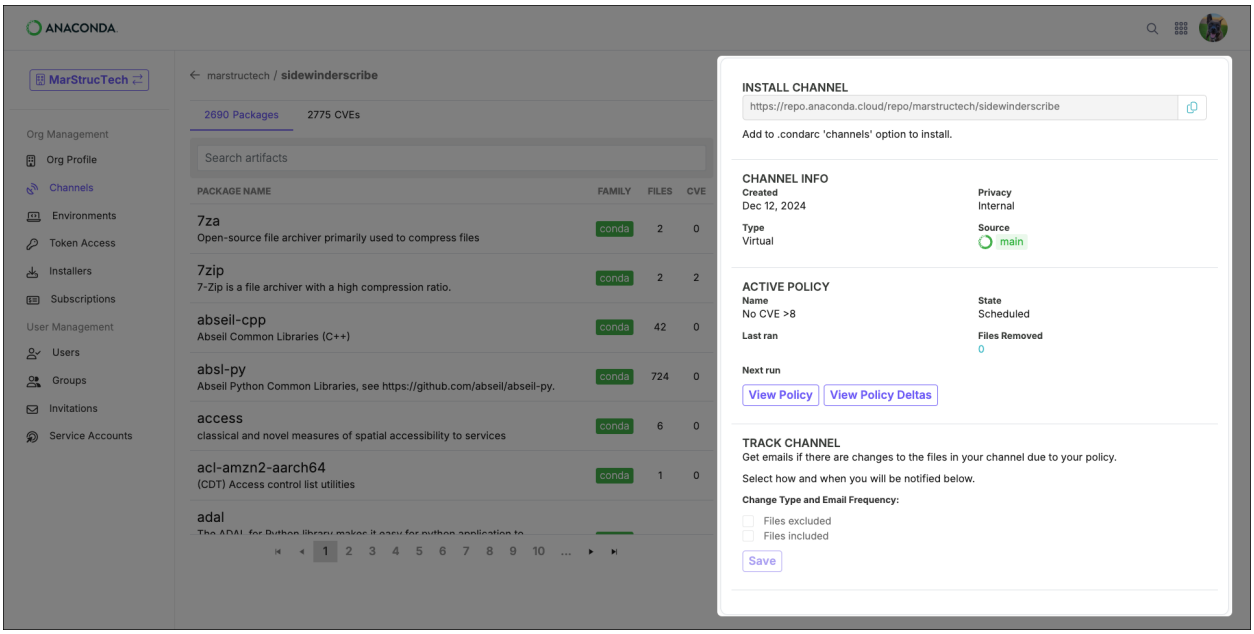
Viewing channel details

From the **Channels** page, select any channel to view its details.

The channel details page provides the following information about the channel:

- The channel's address (a URL you can copy and add to your `.condarc` file to access the channel's packages)
- General information about the channel
- Information about the policy that is applied to the channel

Tip: You can also *track your channel* from the channel details page.



Channel policy deltas

Policy filters, once applied to a channel, run every four hours. Sometimes, due to newly reported CVEs or an updated CVE score or status, the contents of your channel will change when the filter performs its scheduled run. A package may become available that was not available previously, or you could find that a package you've been using is removed from your channel!

From the channel details page, click **View Policy Deltas** to view a list of deltas. Deltas are the recorded changes to your channel's contents. Policy delta history begins from when you first applied the policy to the channel. Once the policy is removed from the channel (if you need to edit it, for example) the policy delta history is lost. A new policy delta history is established once the policy is reapplied to the channel. Use the **Start** and **End** date filters to narrow your timeline to locate a specific delta, if necessary. Select a count under either **PACKAGES ADDED** or **PACKAGES REMOVED** to see a list of packages from a specific run.

Tip: Click the arrow to return to your channel policy deltas.

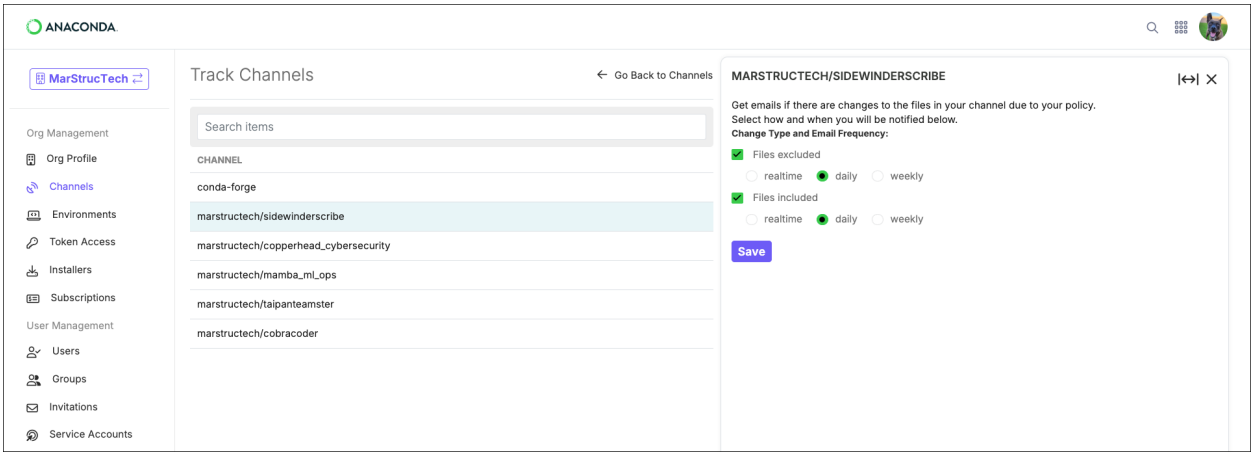
Channel tracking

Track your channels to receive emails at configurable intervals to keep up-to-date with the latest changes to your channels' contents.

From the **Channels** page, click **Channel Tracking** to view the **Track Channels** page.

Note: You can also track a channel from the channel details page.

Select your channel from the list, choose which types of emails you would like to receive, and then set the frequency at which you would like to receive them. You can receive emails in realtime, daily, or weekly. Click **Save** to retain your changes.



Tip: Because deltas are generated when the policy filter runs, the realtime option can generate a maximum of one email every four hours.

Adding an organization channel to your `.condarc` file

In order to pull packages from any of your organizations' virtual channels, you must first configure your `.condarc` file to tell conda where the channel is located. Complete the following steps to add one of your organizations' channels to your `.condarc` file.

1. From the **Channels** page, click **Copy channel path** beside the channel you're adding to your `.condarc` file.
2. Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

   ```
   # Replace <CHANNEL_PATH> with the copied channel path
   conda config --prepend channels <CHANNEL_PATH>
   ```

   This will configure conda to check the specified channel for packages first, but will still look in the `default_channels` if `defaults` is present in the channel list. If you want to restrict where you pull packages from to one specific channel in your organization—for example, one with a policy filter applied to it—update your `.condarc` file to only include that channel in the channels list.

   Your `.condarc` file might look something like this:

```
channels:
  - https://repo.anaconda.cloud/repo/<ORG_ID>/<CHANNEL_NAME>
  - defaults
add_anaconda_token: true
restore_free_channel: false
default_channels:
  - https://repo.anaconda.cloud/repo/main
  - https://repo.anaconda.cloud/repo/r
  - https://repo.anaconda.cloud/repo/msys2
```

Note: If you want to only use your organizations' channels, ensure that they are the *only* channels present in your `.condarc` file.

Removing a channel from your .condarc file

To remove a channel from your `channels:` list, open a terminal and run the following command:

```
# Replace <CHANNEL> with the URL listed in the
# channels: section of the .condarc file
conda config --remove channels <CHANNEL>
```

For example, if you don't want to pull packages from the default channels, you can run the following command:

```
conda config --remove channels defaults
```

Note:

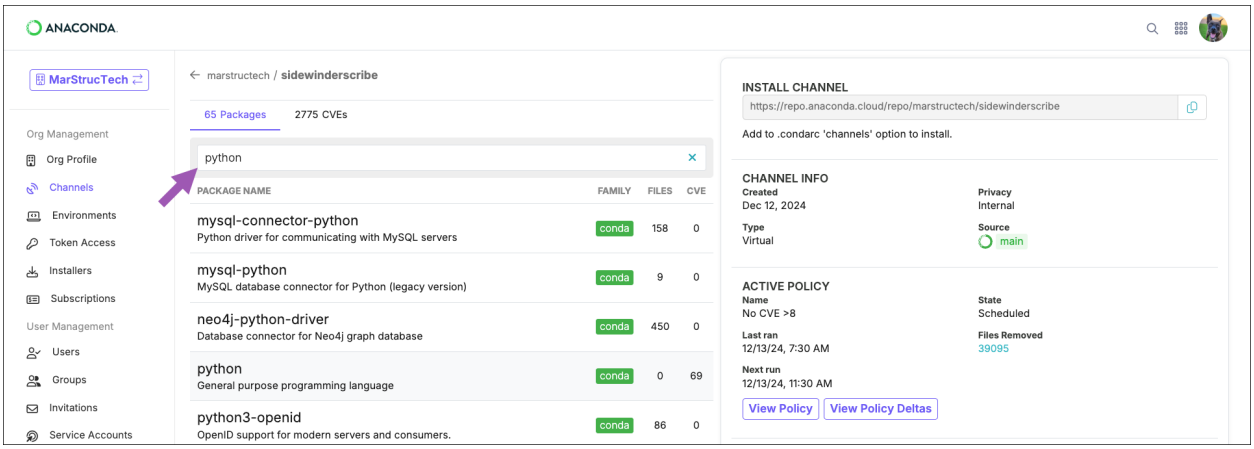
- This will leave the channels listed under `default_channels:` in the `.condarc` file for later use, if needed, but won't look for packages in those locations.
- You can add the default channels to your `.condarc` file's `channels:` list at any time by running the command: `conda config --append channels defaults`

Packages

Searching for packages

If you want to know if a package is available on one of your organization's channels, search for it by entering the package name into the **Search artifacts** field of the channel details page.

Note: If you see that the package contains zero files, it means that all the files for that package were removed from the channel, and the package is not available. Select the package to view the reason the files were removed.



Viewing package details

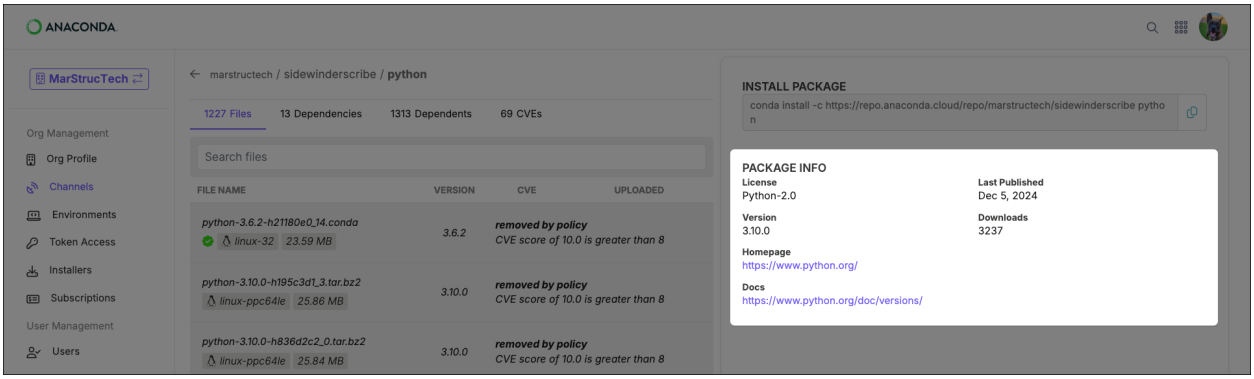
Clicking on any package in a channel will display the package details.

From here, you can view the following information:

- All the files contained within the package
- The package's dependents (other packages that require this package to operate properly)
- The package's dependencies (other packages that this package needs to operate properly)
- CVEs that are associated with files in the package **(for Business tier organizations)**

> **Caution:** Conda automatically installs a package's dependencies along with the package itself when that package is requested from the channel. If a dependency is not available due to an applied policy filter, you will not be able to build a working environment with the packages from the current channel.

General information about the package, such as its license type, version number, web homepage, and documentation (if available) is also available from this page.

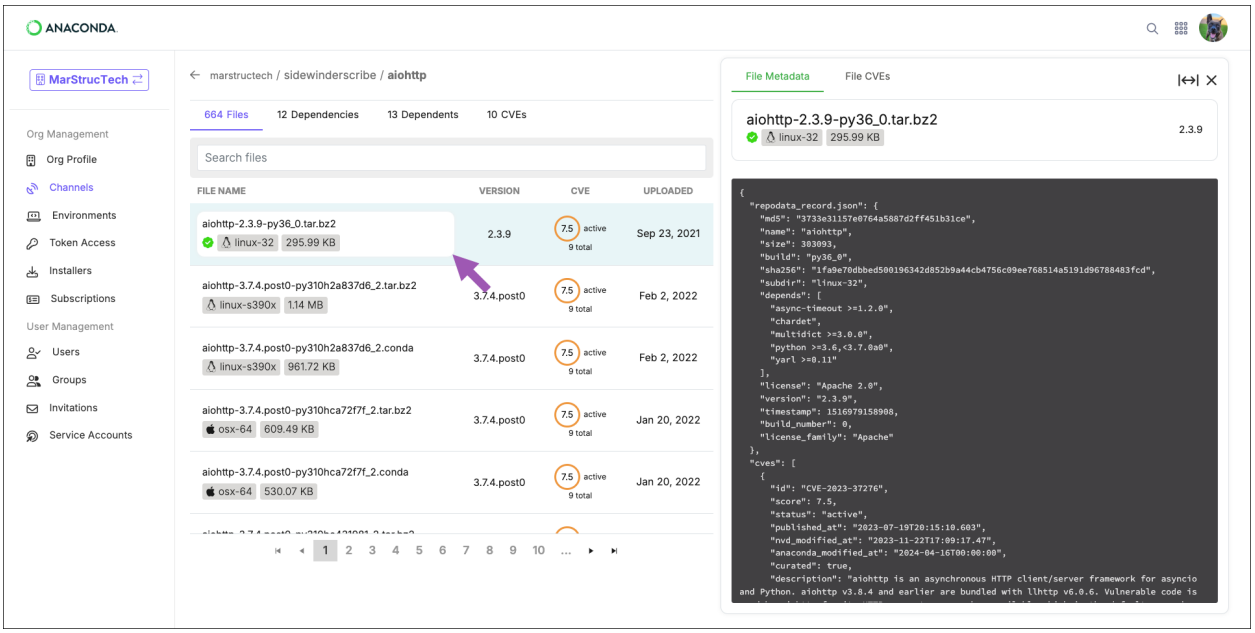


Package signatures

Packages in Anaconda's repository come with a security signature: a special key value that proves that the package hasn't been tampered with since going through Anaconda's curation process. Files within a package that have a signature display a green check beside their names. The actual signature value can be viewed at the bottom of the metadata file.

Viewing package metadata

From the package details view, click on a file's name to display its metadata. The metadata is a `.json` formatted file that contains all of the information about the package file.

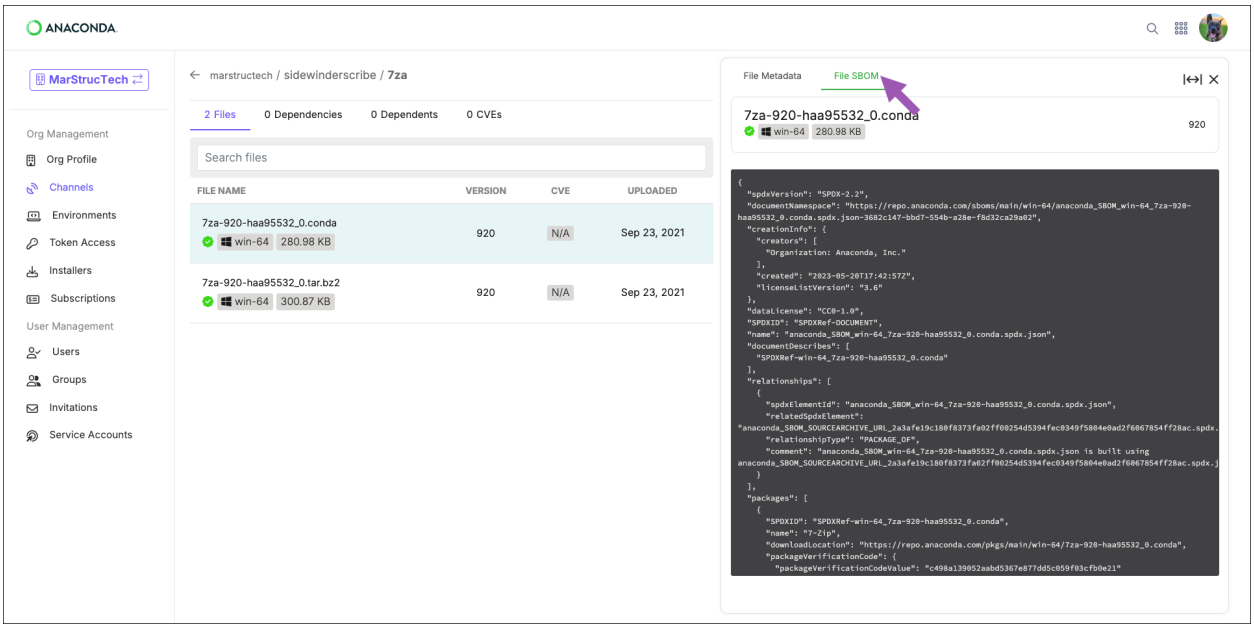


Tip: Click expand to view the metadata in full screen.

Viewing package SBOMs

Anaconda's Software Bill Of Materials (SBOMs) are built in accordance with Software Package Data Exchange (SPDX) specifications, version 2.2.1, which specifies the checksum hash values of software down to the individual file level.

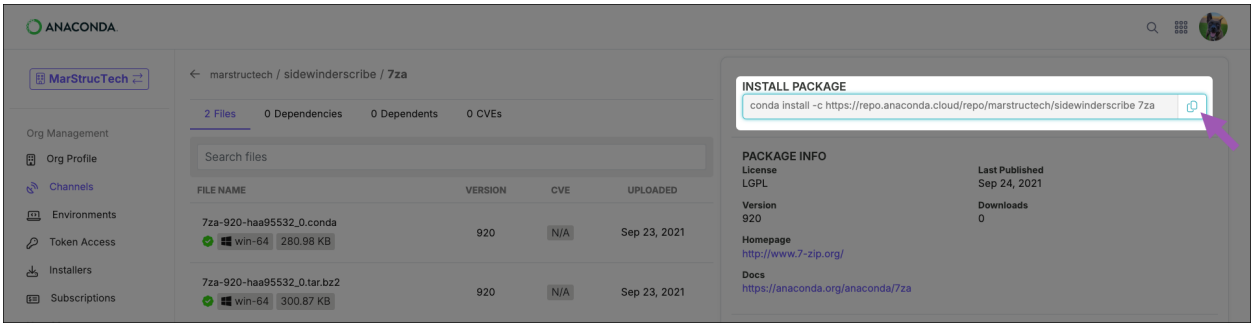
From the package details view, click on a file's name, then select the **File SBOM** tab.



Note: If no SBOM tab appears, there is no SBOM for that package file.

Installing a package in your environment

The package details page also provides you with a command to run if you want to install the package from this channel. Keep in mind that all the package's dependencies will also be installed.



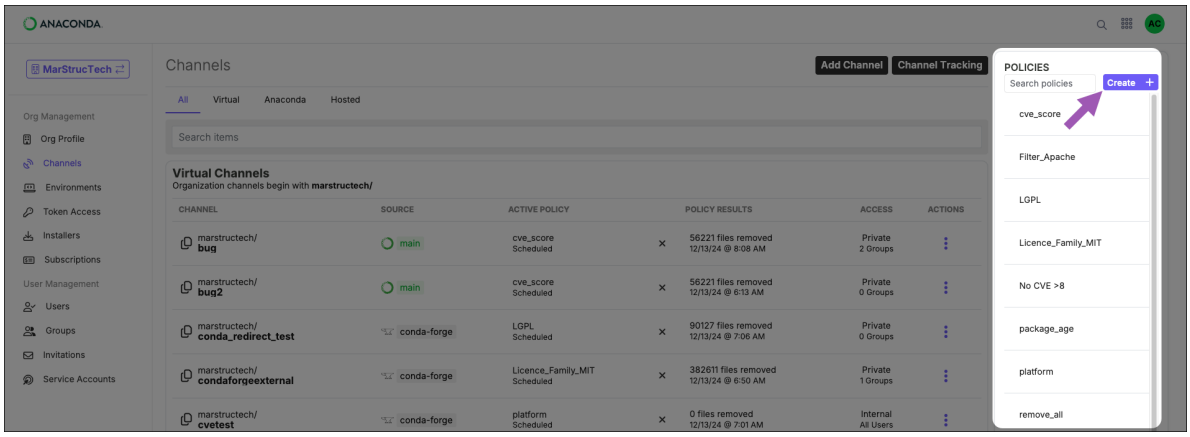
Policy filters

Caution: Policy filters are only available to Business and Enterprise tier customers.

A policy filter is an additional security measure you can apply to a channel to restrict the available packages that can be sourced from it. You can filter packages by license family, common vulnerability and exposure (CVE) score, CVE status, package age, platform, and by using conda spec. For more information about CVE scores and statuses, see *Common Vulnerabilities and Exposures (CVEs)*.

Creating a policy filter

1. From the **Channels** page, click **Create** under **POLICIES**.

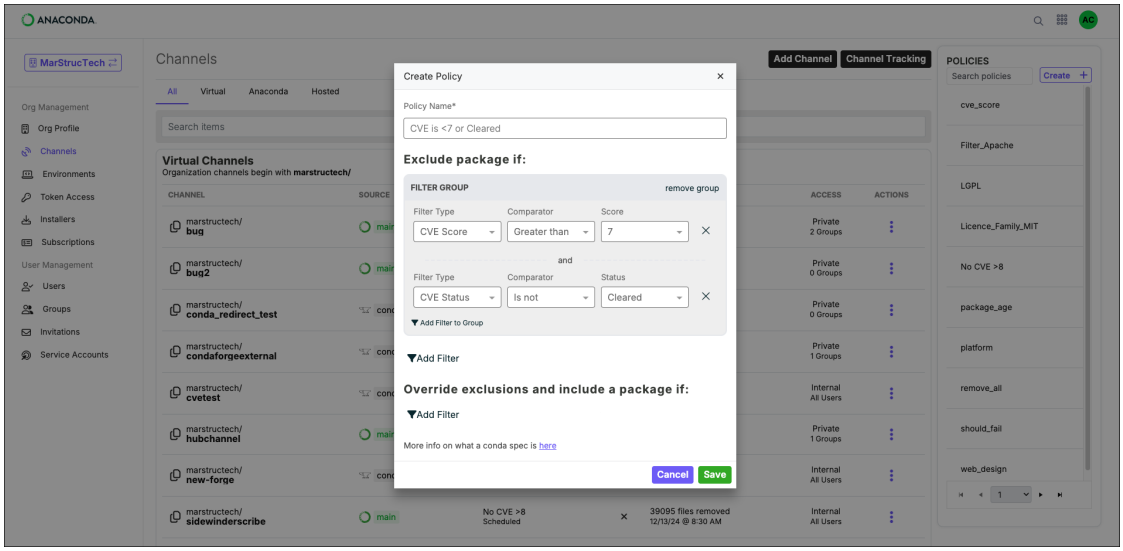


2. Provide a unique name for your policy. Anaconda recommends making it something descriptive.
3. In the **Exclude package if** section, click **Add filter**.
4. In the **FILTER GROUP** section that appears, set filter parameters for packages you wish to *exclude* from channels with this policy.
5. Click **Add Filter to Group** to include additional parameters for this filter group, or click **Add filter** to add a separate filter for this policy.
6. Repeat this process to apply further package filtering preferences.
7. If necessary, in the **Override exclusions and include a package if** section, click **Add filter**. Here, you can apply filters to *include* specific packages that would otherwise be *excluded* by this filter.

Note: You can only include packages based on conda spec.

Example policy filter

Let's say you want to filter out packages with a CVE score greater than 7, but only if their CVE Status has not been *Cleared* by NIST. Your policy filter would look like this:



Applying a policy filter

Applying a policy filter to a channel restricts the packages that are able to be sourced from it.

1. From the **Channels** page, click **Apply** beside a channel's name.
2. Select a policy to apply to the channel.
3. Click **Apply** to confirm.

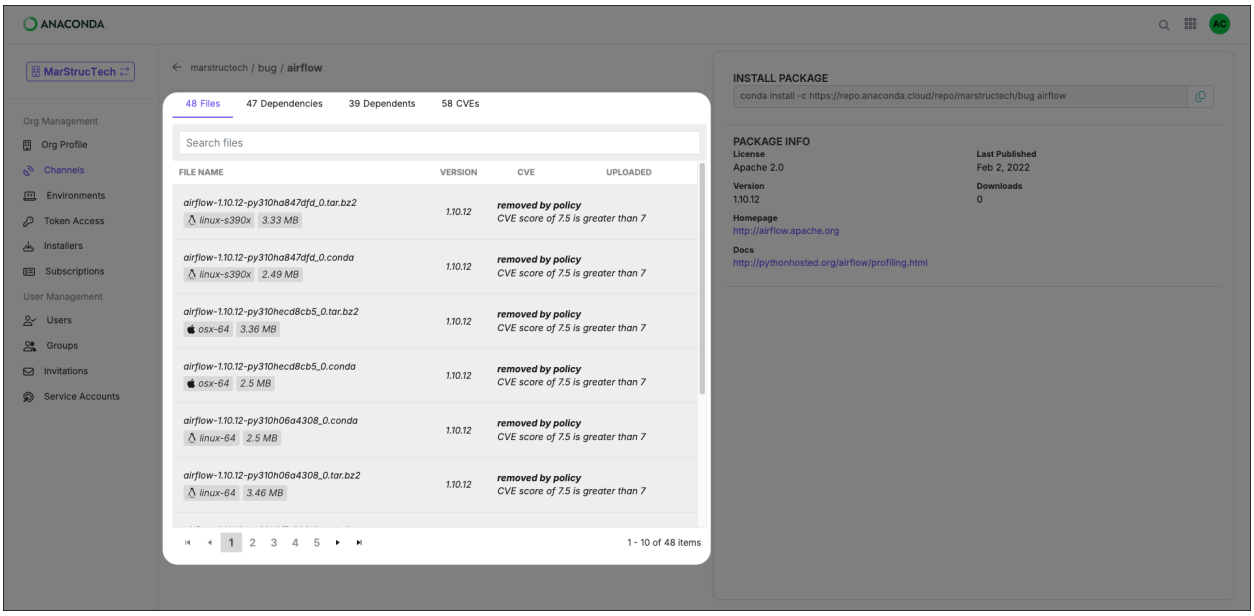
Once the policy is applied, the status beneath the policy will transition through the following phases:

- In Queue
- In Progress
- Completed
- Scheduled

The **Scheduled** status indicates the channel is set to auto-update. This means the filter will be reapplied to the channel every four hours and will update the channel's contents accordingly.

Note: Remove the policy filter by clicking **Remove Policy** beside the policy name in the channel list.

Package files that have been removed from a channel due to a policy filter display the specific reasons they were excluded.



Note: Removed files are not grouped, and some packages have multiple pages of files. For packages with many files, it is best to use the search box to narrow results.

Editing a policy filter

Caution: Policies that are currently in use cannot be edited.

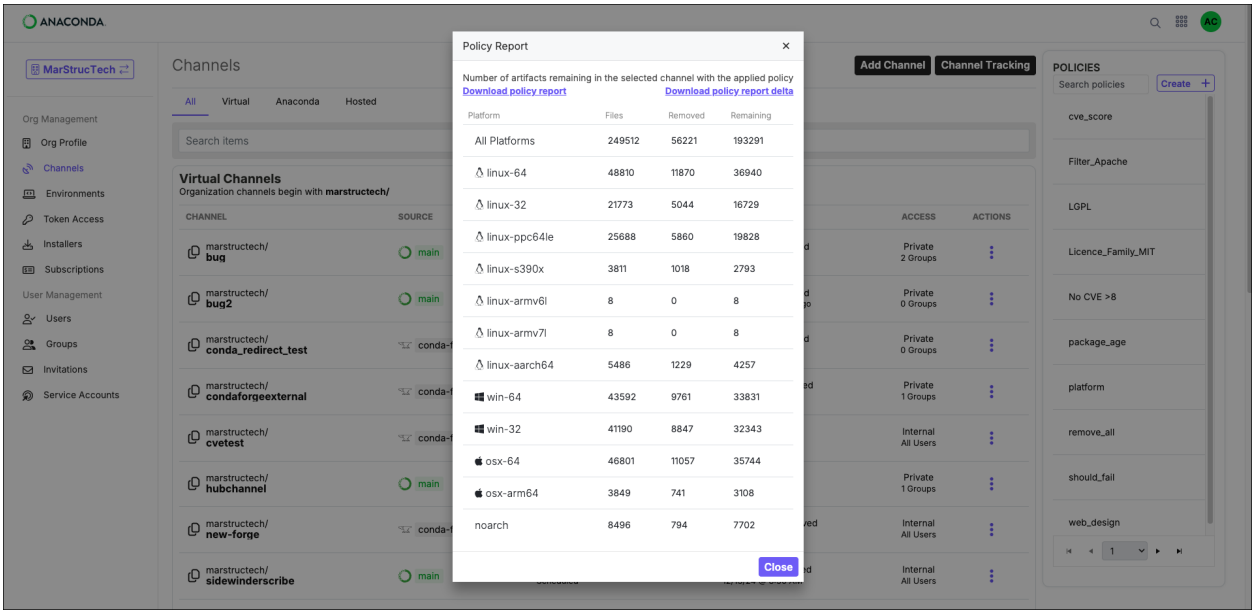
1. Select the policy name from the **POLICIES** list.
2. Change the parameters of the filter as if you were creating a policy.
3. Click **Save**.

Note: A warning displayed beside your filter indicates that it has become deprecated. Deprecated filters still work, but Anaconda recommends you update your policies to no longer use these filters.

Viewing the policy report

Once you have applied a policy filter to a channel, view the **Policy Report** to see a breakdown of the number of package files across various platforms that have been removed, and how many remain.

From the **Channels** page, click the **POLICY RESULTS** for any channel to open the **Policy Report**.



Note: From here, you can download the policy report or the *policy report delta* in `.csv` format.

Environments

Note: This feature is in beta testing.

Administrators can monitor the packages installed in user environments, view any Common Vulnerabilities and Exposures (CVEs) associated with them and, if necessary, enforce security standards by blocking the environment from use. IT administrators can also provide a custom message to guide users through environment remediation. This telemetric data assists your IT administrators with auditing tasks by ensuring users are compliant with your security requirements and providing historical tracking for infrastructure audits.

Members can use these tools to ensure their local environments are in compliance with organizational security requirements and avoid machine quarantines or losing access to an environment due to administrator intervention.

In order to utilize the Environments feature, *organization members (including administrators) must first complete the required setup steps to enable environment management*. For more information and instructions for enabling environment management, see the *Quickstart guide*.

Logging environments

With `anaconda-env-log` installed, all newly created environments are automatically logged within conda, and existing environments are automatically logged whenever you perform certain `conda` actions (`install`, `remove`, `rename`, or `update`) in them. Existing environments can also be logged manually by running the following command:

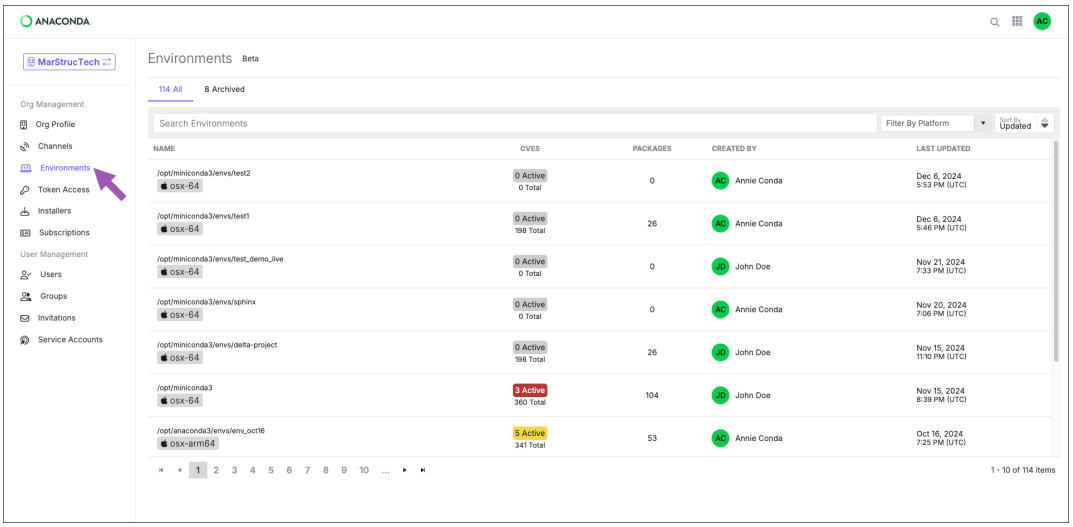
Caution: You must log in to Anaconda Cloud using the CLI prior to manually logging an environment.

```
# Replace <ENV_NAME> with the  name of the environment you want to log to your␣
↪organization
conda env-log log --name <ENV_NAME>
```

Viewing logged environments

Environments logged with an organization can be viewed at any time from the **Environments** page. Members can view the environments they've logged, while administrators have access to view every environment logged with the organization.

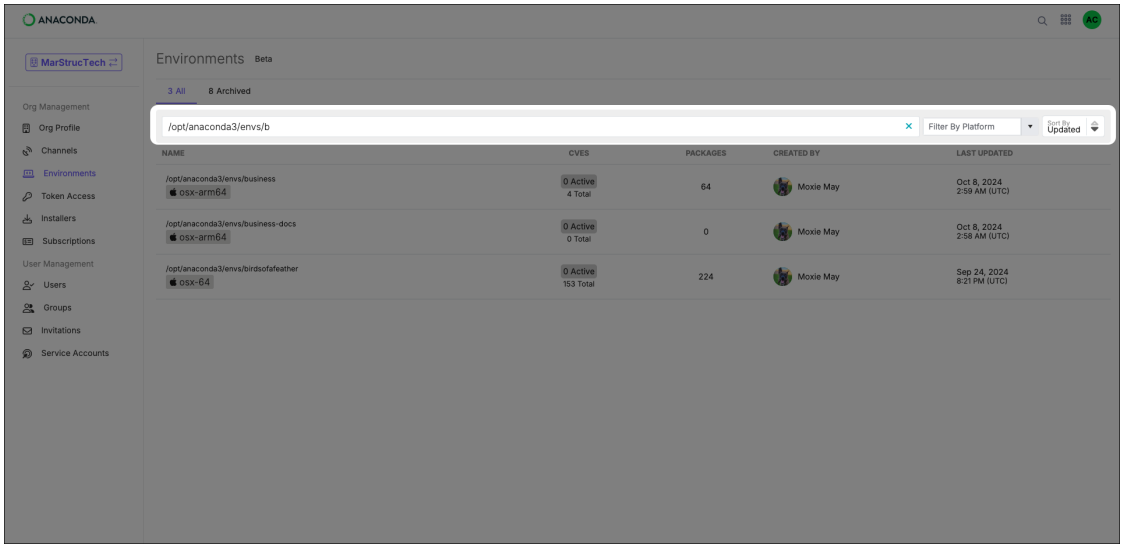
1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.



The Environments page shows you:

- Environment names and locations
- The number of packages in the environments
- The number of CVEs associated with the packages in the environments
- The environment's creator
- The last time the environments were updated

Tip: Use the filters at the top of the table to locate environments efficiently.



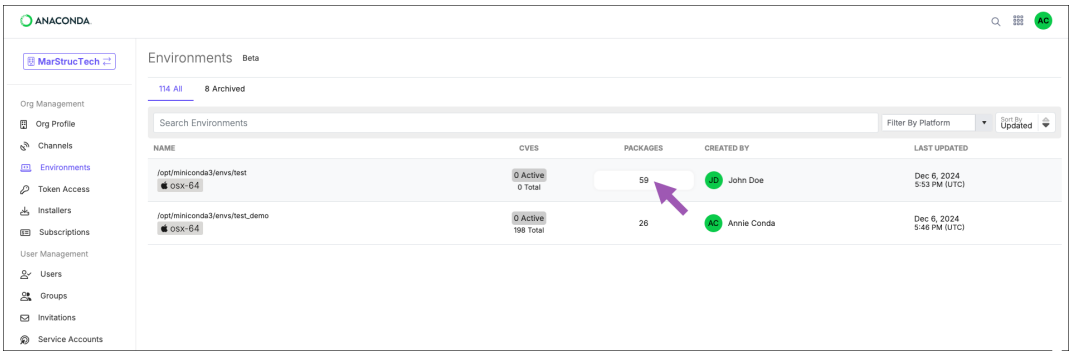
Exploring logged environments

Environments that are logged with an organization can be browsed to gain insights into the packages that they contain. You can see which packages are present in the environment as well as any CVEs associated with them.

Viewing environment packages

The environment's **Packages** page shows you which packages are in an environment and what channels they were sourced from.

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the package count displayed under the **PACKAGES** column.



Note: Use the navigation controls at the bottom to browse the environment's packages.

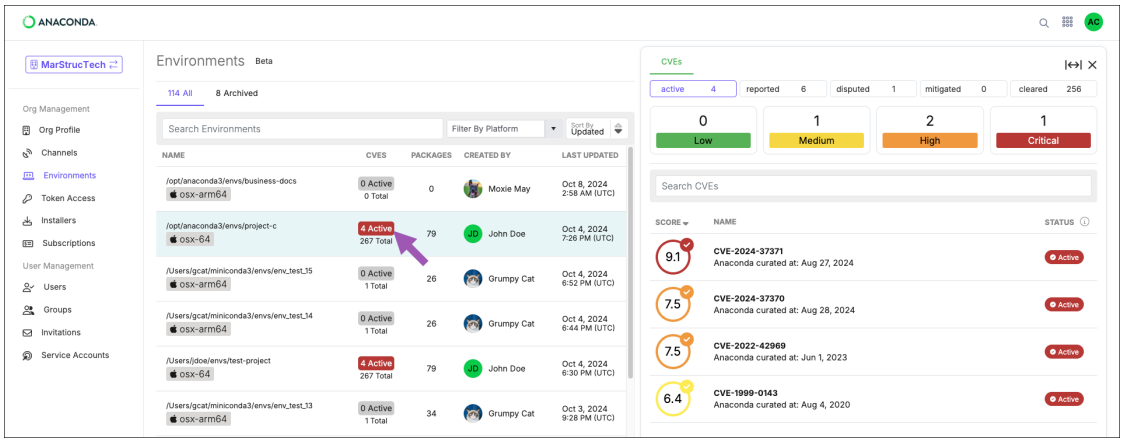
Viewing CVEs

Viewing environment CVEs

The **CVEs** panel shows all of the CVEs associated with the environment by name and severity.

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the CVE count displayed under the **CVES** column.

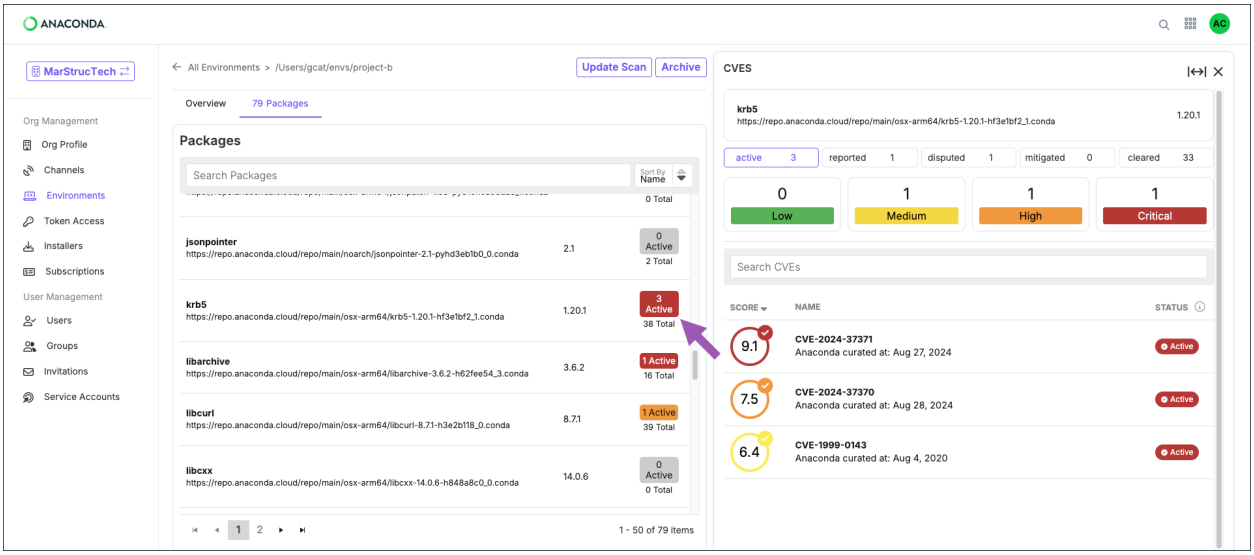
Use the filters at the top of the panel to locate critical CVEs efficiently.



Viewing package CVEs

Narrow your view to CVEs associated with a specific package in an environment:

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the package count displayed under the **PACKAGES** column.
5. Locate the package.
6. Click the CVE count displayed under the **CVE** column beside the package.



Note:

- The **active** filter is automatically applied to the CVE panel's displayed results.
- For additional information about a CVE, *search for it in a channel that has no policy applied*.

Scanning environments

Scanning an environment checks the *most recently saved conda environment log* for CVEs associated with the packages it contains.

Note: Environments are automatically scanned when created, but *not* when they are logged or when the log updates. To ensure an accurate assessment of an environment's current CVE state, perform a scan before you explore it in Anaconda Cloud. You can also scan environments locally to identify potential issues immediately.

Scanning from your organization

To scan an environment that has been logged with an organization:

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the environment you want to scan from the list.
5. Click **Update Scan**.

Note: There is no visual notification that the scan has performed. After scanning, review the packages in the environment for newly associated CVEs.

Scanning locally

Use `anaconda-audit` to scan a local environment.

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Scan an environment by running the following command:

```
# Replace <ENV_NAME> with the name of the environment you want to scan
anaconda audit scan --name <ENV_NAME>
```

Blocking environments

Administrators can take action on environments that don't meet security standards by utilizing organizational environment security status controls, which allow them to place a warning on an environment or block access to it completely. In both cases, administrators can enter a personalized message with guidance on what actions must be taken to restore access. Organization members who have had their environment blocked will receive the administrator's message next time they try to activate the environment.

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the environment you want to take action on.
5. Click **Update Status**.

6. Select a status to apply to the environment and enter a custom message, if necessary.
7. Click **Save**.

Archiving environments

Archiving environments allows administrators to maintain an organized workspace by moving inactive or obsolete environments to a dedicated tab. This separation reduces clutter in the active environment list, making it easier to manage.

1. Navigate to your page.
2. Select your organization.
3. Select **Environments** from the left-hand navigation.
4. Select the environment you want to take action on.
5. Click **Archive**.

Note: Archived environments are still available for use. If you would like to prevent the environment from being used, *block the environment*.

Service accounts

A service account is a set of credentials that allows you to manage your organization programmatically by enabling you to authenticate to the Anaconda Cloud API. For more information, see *Managing your organization using the Anaconda Cloud API*.

Only administrator users can create service accounts. You can create as many service accounts per organization as you need. However, Anaconda recommends limiting the number of service accounts to no more than is absolutely necessary. Restricting the number of service accounts enhances your organization's security posture.

Creating a service account

To create a service account:

1. Log in to Anaconda Cloud.
2. Navigate to your page.
3. Select the organization you want to create a service account for.
4. Select **Service Accounts** from the left-hand navigation.
5. Click **Add Account**.
6. Provide a name for your service account.

   Note: Service account names must be created using lower case letters, numbers, hyphens, or underscores, and cannot contain spaces or special characters.

7. Click **Save**.

   Caution: Save your **Client Secret** somewhere secure! Once you close the window, you will not be able to recover the **Client Secret**.

Security practices

Token privacy

You need a private token to access channels and content. For your security, *save your token in a secure location*.

Conda package signature verification

Caution: Conda signature verification requires conda version 4.10.1 or later. Signature verification is not enabled by default.

The conda signature verification feature—available to users with paid access to our premium repository—allows you to detect tampering with packages and package metadata that took place between our secure build process and the end user's install process. Based on The Update Framework (TUF), it provides defense against a wide variety of attacks.

Please see our blog post on conda signature verification for more information.

Enabling conda signature verification

1. Install the necessary packages:

```
conda install "conda>=4.10.1" "conda-token>=0.3.0" conda-content-trust
```

2. Use `conda-token` to configure access, turn on signature verification, and empty the index cache:

```
conda token set --enable-signature-verification <YOUR_PRODUCT_TOKEN>
```

Conda signature verification should now be enabled. When using conda to install packages from the premium repository, conda informs you of the signature status of the proposed packages by appending the following to trusted packages:

```
(INFO: package metadata is signed by Anaconda and trusted)
```

If the trusted signatures do not match the data, tampering may have occurred, and conda will append a warning to the package instead:

```
(WARNING: metadata signature verification failed)
```

Note: If no signatures are currently provided for a package (for example, if you are installing from third-party channels), the signature status message is not provided.

example result

```
(environment)   ~ conda install django

## Package Plan ##

    environment location: /home/s/miniconda3-av2

    added / updated specs:
        - django


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    asgiref-3.3.4              |     pyhd3eb1b0_0          24 KB
    django-3.2                 |     pyhd3eb1b0_0         3.1 MB
    krb5-1.17.1                |       h173b8e3_0         1.3 MB
    libpq-12.2                 |       h20c2e04_0         2.1 MB
    psycopg2-2.8.6             |   py38h3c74f83_1         160 KB
    pytz-2021.1                |     pyhd3eb1b0_0         181 KB
    sqlparse-0.4.1             |             py_0          35 KB
    ------------------------------------------------------------
                                       Total:         6.9 MB

The following NEW packages will be INSTALLED:
```

(continues on next page)

(continued from previous page)

```
    asgiref       repo/main/noarch::asgiref-3.3.4-pyhd3eb1b0_0 (INFO: package metadata␣
↪is signed by Anaconda and trusted)
    django        repo/main/noarch::django-3.2-pyhd3eb1b0_0 (INFO: package metadata is␣
↪signed by Anaconda and trusted)
    krb5          repo/main/linux-64::krb5-1.17.1-h173b8e3_0 (INFO: package metadata is␣
↪signed by Anaconda and trusted)
    libpq         repo/main/linux-64::libpq-12.2-h20c2e04_0 (INFO: package metadata is␣
↪signed by Anaconda and trusted)
    psycopg2      repo/main/linux-64::psycopg2-2.8.6-py38h3c74f83_1 (INFO: package␣
↪metadata is signed by Anaconda and trusted)
    pytz          repo/main/noarch::pytz-2021.1-pyhd3eb1b0_0 (INFO: package metadata is␣
↪signed by Anaconda and trusted)
    sqlparse      repo/main/noarch::sqlparse-0.4.1-py_0 (INFO: package metadata is␣
↪signed by Anaconda and trusted)
```

Disabling conda signature verification

To turn the feature off, you can adjust your conda configuration:

```
conda config --set extra_safety_checks false
```

Frequently asked questions

Questions regarding installers & packages, conda, or Navigator

For any questions regarding installers and packages, please refer to *Distribution Troubleshooting*.

For help with conda, please refer to the official conda documentation.

For help with Navigator, please refer to our Navigator documentation.

Getting started with Anaconda

What do I get from this tier that I don't get from the free tier (Anaconda Distribution)?

- Secure access to our commercial package repository, with a new URL and token for access
- Compliance for commercial use according to the Anaconda Terms of Service
- Ability to leverage mirroring software to create copies of the commercial package repository (Site license only)
- Policy filters and virtual channels (Business tier only)

Can I still keep my Anaconda Distribution account?

Yes, as long as your Anaconda Distribution account is used for non-commercial activities.

Does my personal email address associated with my account follow me to my corporate membership?

It can, but Anaconda recommends using your corporate email so your admin can track all tokens in use.

Setting up and managing your Anaconda account

How do I verify my account?

Accounts are verified through a link that is sent to the email address you used to sign up.

What happens if I do not receive an email verification?

If you work for a company with strict firewall protections, your verification email may be delayed. Check your email's spam folder in case it was delivered there. If you don't find it in your spam folder, please submit a ticket.

Note: Your verification email link must be used within 24 hours. If not, you must generate a new verification email.

What happens if I get an error after clicking the verification link?

Please submit a ticket for account-related questions.

Does my password expire?

No, your password will not expire.

How long will my login remain active?

Anaconda Cloud allows you to remain logged in until it detects one hour of inactivity. After that, you will need to sign in again.

Authenticating Anaconda

How do I obtain my access token?

For individual subscribers, a private token will be sent to the email address associated with your Anaconda Cloud account.

For organization members, you can *issue yourself a token by following instructions provided here after you have been assigned a seat*.

What happens if I lose my access token?

For individual subscribers, you can re-issue yourself a new token here.

For organization members, you can *re-issue yourself a new token by following instructions provided here*.

> **Caution:** Requesting a new token will revoke and deactivate your existing token's access. Remember to update your access token by running the `conda token set <TOKEN>` command.

Do I ever need to update my access token?

If you are transitioning from an individual user license to a site license, you will need to update your access token. A site licence will provide you with a token that anyone in your organization can use to access the repository.

What if I need multiple access tokens, like for a team of users?

If you need multiple tokens for your team, each team member must create an Anaconda Cloud account to obtain an access token.

What happens if someone else uses my token?

If you suspect someone else is using your token, you should immediately re-issue yourself a token. This will deactivate your previous token and revoke it's access. See *What happens if I lose my access token*.

How do I prevent unauthorized access?

Keep your access token private and secure.

What do I do if my access token does not work?

Please submit a ticket for account-related questions.

When does my token expire?

Your token's expiration date is based off your subscription's expiration date. However, renewing your subscription will not extend the life of your token. If you renew your subscription, you will need to *sync your token* to extend its life to your new subscription expiration date.

Setting up my access

Can I add support to my subscription?

Yes. This is done via a sales agreement. Please contact sales at sales@anaconda.com.

How do I activate my account?

If you have not downloaded Anaconda installers yet, you can get them here. To authenticate Anaconda, please refer to the Authenticating Anaconda section in the *Quickstart guide* for detailed instructions.

How do I add `repo.anaconda.cloud` to the `.condarc` file?

Setting your token, either via the CLI or by signing into Anaconda Navigator, will automatically configure your `.condarc` file to use packages from the `repo.anaconda.cloud` channels `main`, `r`, and `msys2` (Windows only).

Setting up and managing payments and billing

How do I view my subscription information?

Individual subscription

For individual subscriptions, open the user dropdown menu and select .

Organization subscription

Navigate to your page, select your organization, then select **Subscriptions** in the left-hand navigation.

How do I manage my subscription?

Individual subscription

1. .
2. Open the user dropdown menu and select **Subscriptions**.
3. 1. Click **Manage Subscription** to access Stripe.

Organization subscription

1. Navigate to your page.
2. Select your organization, then select **Subscriptions** in the left-hand navigation.
3. Click **Manage Subscription** to access Stripe.

In Stripe, you can add or change a payment method, update your billing address, download an invoice, or change your plan.

How do I cancel my subscription?

For instructions on how to cancel your subscription, see *Canceling a subscription*.

Note: Requesting cancellation will initiate revoking any subscription-based access on your account.

Will I get a notification of my cancellation?

Yes, you will receive an email confirming your subscription has been cancelled.

What happens to my current account when I cancel my subscription?

You will have access to Anaconda until the end of the paid subscription period. For example, if you purchased a monthly subscription, your access will last until the end of the month.

How do I access my payment information?

Navigate to your page, select your organization, and then select **Subscriptions** in the left-hand navigation. Click **Manage Subscription** to access Stripe and your payment information.

How do I change or add credit card information?

Navigate to your page, select your organization, and then select **Subscriptions** in the left-hand navigation. Click **Manage Subscription** to access Stripe and change or add your credit card information.

How do I change my organization billing manager?

Note: Only administrators can change member permissions. Administrators can not change their own permissions.

Navigate to your page, then select your organization. From the **Users** page, you can assign a new billing manager by selecting a user, then clicking **Assign as Billing Manager**. Click **Assign as Billing Manager** again to confirm.

How can I get my payment history?

You will be emailed receipts for your payments when they are made. You can also view your payment history at any time from Stripe.

Navigate to your page, select your organization, and then select **Subscriptions** in the left-hand navigation. Click **Manage Subscription** to access Stripe.

In Stripe, scroll down to see your invoice history. Select any invoice from the list to download either your invoice, or your receipt.

How long does it take to see a payment posted?

Approximately 5-10 business days after payment confirmation, depending upon the bank.

What happens if my credit card is breached?

If your credit card is breached, change your credit card details in Stripe.

Navigate to your page, select your organization, and then select **Subscriptions** in the left-hand navigation. Click **Manage Subscription** to access Stripe.

In Stripe, click **edit** to update your credit card information.

Who hosts my credit card data?

Stripe. Anaconda does not host your financial data.

What company shows up on my bank statement?

Stripe. Anaconda will show in the description.

When will I be billed, monthly or yearly?

For monthly subscriptions, you will be billed a prorated amount for the current month and on the 1st of every month thereafter.

For yearly subscriptions, you will be billed one year from the date you purchased your current subscription.

Is my membership prorated?

Yes, based on the date of purchase. For example, if you are billed on December 5, you have been charged for the prorated amount between December 5 through December 31.

If I cancel mid-month, how long will I have access to the platform?

You will have until the end of the canceled month.

How do I change my subscription duration, i.e. switching from monthly to annual or annual to monthly?

Navigate to your page, select your organization, and then select **Subscriptions** in the left-hand navigation. Click **Manage Subscription** to access Stripe.

In Stripe, click **Update subscription**. Select either **Monthly** or **Yearly**, then click **Continue**. On the next page, click **Confirm**.

Do I have to have a credit card on file?

Yes. Purchases require an active and valid card on your profile.

What is your refund policy?

We do not offer refunds or exchanges.

Will I get a receipt?

Yes, we will email your receipt after purchase to the email address associated with your profile.

How do I delete my account and personal data?

You can request the deletion of your account and personal data at anytime by navigating to the **Privacy & Security** page and clicking **Delete my account**.

Anaconda community

How do I report suspicious activity on the platform?

You can report any suspicious activity by submitting a ticket.

How do I report a bug?

You can report bugs or any other errors to our anaconda-issues repo.

Troubleshooting

This page details some common issues and their respective workarounds. For Anaconda installation or technical support options, visit our support offerings page.

Tip: You can search this page for information using your browser's search function: Ctrl+F (Windows)/Cmd+F (Mac).

Conda: Channel is unavailable/missing or package itself is missing

Cause

After you have configured your `.condarc` on either the Pro (legacy) or Business tier, in some cases you may be unable to install packages. You may receive an error message that the channel or package is unavailable or missing.

Solution

One potential fix for all of these is to run the following command:

```
conda clean --index-cache
```

This will clear the "index cache" and force conda to sync metadata from the repo server.

Receiving a 403 error from an Anaconda channel

Tip: If you are working with the Anaconda-hosted `conda-forge` and are receiving a 403 error, see *Receiving a 403 error from hosted conda-forge* instead.

Cause

A 403 error is a generic HTTP error issued by a web server in the event the client is forbidden from accessing a resource. In other words, if you are receiving a 403 error, conda thinks that either the channel doesn't exist or you do not have permission to use it.

The 403 error you are receiving might look like this:

```
Collecting package metadata (current_repodata.json): failed

UnavailableInvalidChannel: HTTP 403 FORBIDDEN for channel main <https://repo.anaconda.
↪com/repo/main>

The channel is not accessible or is invalid.

You will need to adjust your conda configuration to proceed.
Use `conda config --show channels` to view your configuration's current state,
and use `conda config --show-sources` to view config file locations.
```

There are a few possible reasons for receiving this error:

- You have misconfigured the channels in your `.condarc` file.
- A firewall or other security device or system is preventing user access.
- Access is blocked due to a potential terms of service violation.

Solution

First, double-check your channel configurations and verify that the address has been entered correctly.

If that fails, speak with your IT administrator to ensure your proxy or firewall is not blocking traffic to the repository channels.

If you are sure traffic is not being blocked and your issue persists, open a support ticket.

HTTP 000 CONNECTION FAILED

Cause

This is generally caused by a proxy misconfiguration, which can be corrected by setting your proxy servers correctly. However, because some businesses do not have an easy method of providing their SSL cert, Anaconda recommends bypassing the SSL verification step if you encounter this error.

Solution

If you receive this error message, first run the following command:

```
conda config --set ssl_verify false
```

(Package Security Manager users) If necessary, install `conda-token` by running the following command:

```
conda install conda-token --channel https://repo.anaconda.cloud/repo/anaconda-tools --
↪name base
```

(Package Security Manager users) Ensure the token verification step ignores SSL errors by running the following command:

```
# Replace <TOKEN> with your token
conda token set --no-ssl-verify <TOKEN>
```

You may see the following warning, though you can safely ignore it:

```
/Users/<USERNAME>/Applications/miniconda3/lib/python3.7/site-packages/urllib3/
↪connectionpool.py:1020: InsecureRequestWarning: Unverified HTTPS request is being made␣
↪to host 'repo.anaconda.cloud'. Adding certificate verification is strongly advised.␣
↪See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#ssl-warnings
InsecureRequestWarning,
```

Environment creation failing due to policy filter

Cause

Implementing strict policy filters with no exceptions can cause essential package dependencies to be filtered out of your repository. Without these packages, commands like `conda create --name <ENV_NAME> python=3.11` will fail.

If you are attempting to create a new environment, but your build is failing due to package conflicts or unavailable packages, it's likely due to your IT team's strict policy filter. You can request that package exceptions can be added to a policy filter, but you'll need to know which packages are causing problems first.

Solution

To perform this test, you'll need a channel that has no policy filter applied to it. Create the channel in your organization and name it `quarantine`. Once created, add it to your `.condarc` file. For help adding a channel to your `.condarc` file, see *Channels*.

With your quarantine channel created and added to your `.condarc` file, you can run the following command:

```
# Replace <ENV_NAME> with a test environment name (this is not permanent)
# Replace <CHANNEL> with your channel name
conda create --name <ENV_NAME> --channel <CHANNEL> --channel quarantine python=3.11 --
↪dry-run
```

Note: If you have your channel alias set in your `.condarc`, you can use just the channel name with the `--channel` argument. If you do not, you can use the full channel URL with the `--channel` argument. You can copy the channel URL from your Channels page. For more information on setting your channel alias, see Using the .condarc conda config file.

For example, if you are trying to test building an environment from the *snakes* channel, the command would be:

```
conda create --name test_environment --channel snakes --channel quarantine python=3.11 --
↪dry-run
```

Caution: The ordering of `snakes` and `quarantine` is essential. Conda will attempt to solve the environment in the order the channels are listed, so `quarantine` must be listed last.

Example command return:

```
## Package Plan ##

    environment location: /Users/<USER>/opt/anaconda3/envs/test_env

    added / updated specs:
    - python=3.11

The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    bzip2-1.0.8                |       h80987f9_5         129 KB  snakes
    ca-certificates-2023.12.12 |       hca03da5_0         127 KB  snakes
    libffi-3.4.4               |       hca03da5_0         120 KB  snakes
    ncurses-6.4                |       h313beb8_0         884 KB  quarantine
    openssl-3.0.13             |       h1a28f6b_0         5.0 MB  quarantine
    pip-23.3.1                 |  py311hca03da5_0         3.3 MB  quarantine
    python-3.11.8              |       hb885b13_0        15.5 MB  snakes
    readline-8.2               |       h1a28f6b_0         353 KB  snakes
    setuptools-68.2.2          |  py311hca03da5_0         1.2 MB  snakes
    sqlite-3.41.2              |       h80987f9_0         1.1 MB  quarantine
    tk-8.6.12                  |       hb8d0fd4_0         2.9 MB  snakes
```

(continues on next page)

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```
    tzdata-2024a               |       h04d1e81_0         116 KB  snakes
    wheel-0.41.2               |  py311hca03da5_0         142 KB  quarantine
    xz-5.4.6                   |       h80987f9_0         372 KB  snakes
    zlib-1.2.13                |       h5a0b063_0          82 KB  quarantine
    ------------------------------------------------------------
                                   Total:        31.4 MB

The following NEW packages will be INSTALLED:

    bzip2              snakes/osx-arm64::bzip2-1.0.8-h80987f9_5
    ca-certificates    snakes/osx-arm64::ca-certificates-2023.12.12-hca03da5_0
    libffi             snakes/osx-arm64::libffi-3.4.4-hca03da5_0
    ncurses            quarantine/osx-arm64::ncurses-6.4-h313beb8_0
    openssl            quarantine/osx-arm64::openssl-3.0.13-h1a28f6b_0
    pip                quarantine/osx-arm64::pip-23.3.1-py311hca03da5_0
    python             snakes/osx-arm64::python-3.11.8-hb885b13_0
    readline           snakes/osx-arm64::readline-8.2-h1a28f6b_0
    setuptools         snakes/osx-arm64::setuptools-68.2.2-py311hca03da5_0
    sqlite             quarantine/osx-arm64::sqlite-3.41.2-h80987f9_0
    tk                 snakes/osx-arm64::tk-8.6.12-hb8d0fd4_0
    tzdata             snakes/noarch::tzdata-2024a-h04d1e81_0
    wheel              quarantine/osx-arm64::wheel-0.41.2-py311hca03da5_0
    xz                 snakes/osx-arm64::xz-5.4.6-h80987f9_0
    zlib               quarantine/osx-arm64::zlib-1.2.13-h5a0b063_0

DryRunExit: Dry run. Exiting.
```

Packages that were retrieved from the `quarantine` channel are the packages that need to be considered for exceptions in the policy filter.

Receiving a 403 error from hosted `conda-forge`

Cause

If you have established a connection to the Anaconda-hosted `conda-forge` channel and have started receiving 403 errors when you were not receiving them initially, it is likely that you have recently reissued yourself a token. This issue stems from this newly issued token not having the permissions that were provided to the previous token.

Your 403 error might look like this:

```
Loading channels: failed

UnavailableInvalidChannel: HTTP 403 FORBIDDEN for channel conda-forge <https://repo.
↪anaconda.cloud/repo/conda-forge>

The channel is not accessible or is invalid.

You will need to adjust your conda configuration to proceed.
Use `conda config --show channels` to view your configuration's current state,
and use `conda config --show-sources` to view config file locations.
```

Solution

To provide permissions for the `conda-forge` channel to your newly issued token, navigate to your organization's **Token Access** page and click **Sync token**.

2.18.12 Anaconda Enterprise 4

Anaconda Enterprise 4 includes *Anaconda Distribution*, Anaconda Enterprise 4 Repository, and Anaconda Enterprise 4 Notebooks. This is our previous-generation product, and documentation is provided for our current customers.

Anaconda Enterprise 4 Repository is an enterprise server on your network or your private cloud where open source and proprietary packages may be stored, retrieved, and shared.

Anaconda Enterprise 4 Notebooks is a browser-based Python data analysis environment and visualization tool in a secure, governed environment.

Please refer to Anaconda Enterprise 5 documentation for our current-generation product.

Anaconda Enterprise 4 Repository

Open Data Science Hub

Anaconda Enterprise 4 Repository is an enterprise server on your network or your private cloud where open source and proprietary packages may be stored, retrieved, and shared. It is used to govern access to data science assets including packages, environments, and notebooks.

Anaconda Enterprise 4 Repository has a self-contained internal mirror of packages and can install securely behind an enterprise firewall or in an air-gapped environment. It supports many repositories including PyPI, conda, and the Anaconda Repository.

Many enterprises have customized local instances of repositories. Anaconda also makes an instance of its default repositories available for public use at anaconda.org.

User guide

Getting started

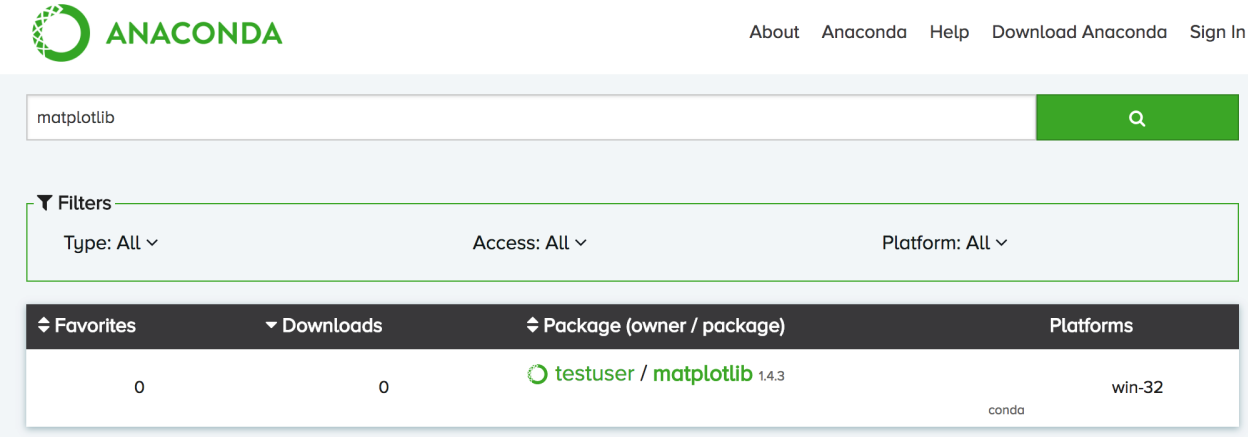
Finding, downloading and installing packages

You do not need to have an Anaconda Enterprise 4 Repository account or be logged in to search for, download, or install packages, notebooks, environments or installers.

You do need an account to access *private packages* without an *access token* and to upload and share your own packages, notebooks, environments and installers with others.

Searching for packages

1. In the top Search box, type part or all of the name of a file you are searching for, and then press Enter (Windows)/Return (Mac).
2. Packages that match your search string are displayed. To see more information, click the package name.



Refining your search results

You can filter search results using 3 filter controls:

- Type: All, conda only or PyPI only.
- Access: All, Public and/or Private—available only if you are logged in.
- Platform: All, Source, Linux-32, Linux-64, Noarch, OSX-64, Win-32 and Win-64.

NOTE: Source packages are source code only, not yet built for any specific platform. Noarch packages are built to work on all platforms.

Downloading and installing packages from Anaconda Enterprise 4 Repository

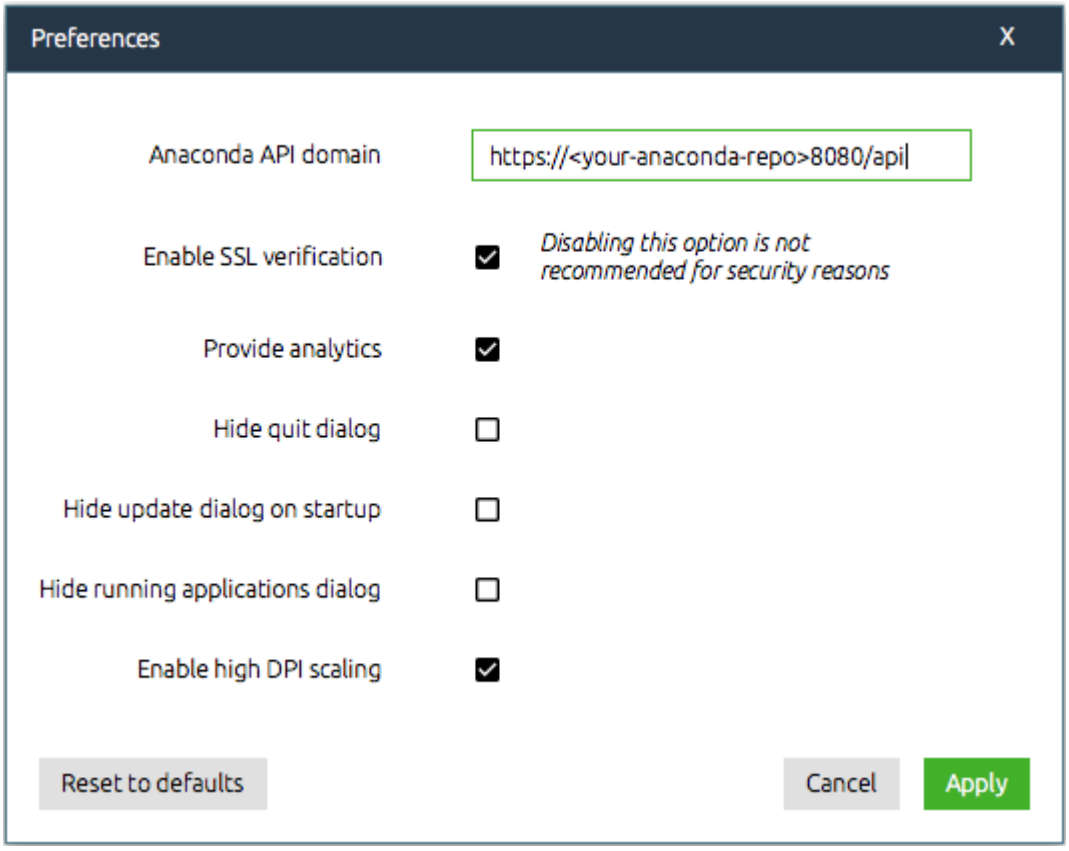
You can download and install packages using *Anaconda Navigator*, the graphical user interface for Anaconda®. Advanced users may prefer a Terminal window or an Anaconda Prompt.

Using Navigator

Navigator is automatically installed when you install Anaconda.

To download and install a package into its own environment:

1. Start Navigator by clicking its program icon on your desktop or in your programs menu.
2. Set up Navigator to search your local Repository:
    1. From the top menu bar, select Preferences.
    2. In the Anaconda API domain box, type the address of your local Repository:



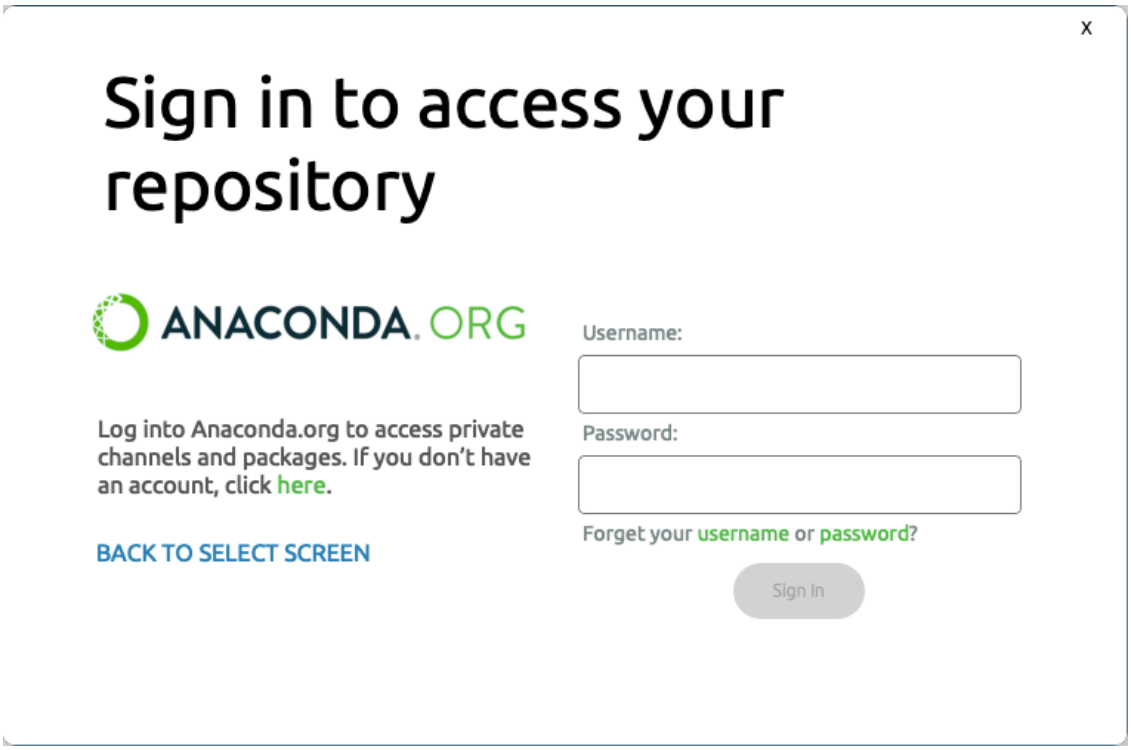
NOTE: If your organization does not use HTTPS, use `http` in the domain box and clear the Enable SSL verification checkbox.

NOTE: If your organization uses subdomains, enter the address as `https://api.<your-anaconda-repo>:8080`. Replace `<your-anaconda-repo>` with the name of your local Repository. If that does not work, contact your system administrator.

3. Click the Apply button.

3. Sign Navigator into your local Anaconda.org—Repository— so you can search for packages marked as private:

    1. Click the top right Sign in to Anaconda.org button.
    2. Type your Repository username and password:



3. Click the Login button.

4. On the **Environments** tab, in the far-right Search packages box, type the name of the desired package.
5. In the list to the left of Channels, select either Not installed or All, then click the Search button.
6. Select the checkbox of the package you want to install, then click the Apply button.

For more information, see the full Navigator documentation *Anaconda Navigator*.

Using conda in a Terminal window or an Anaconda Prompt

Conda is automatically installed when you install Anaconda.

To download and install a package into its own environment:

1. Locate a package on Anaconda Enterprise 4 Repository that you want to download, then click the package name.

   A detail page displays specific installation instructions for the current operating system.

2. Enter the command into your Terminal window or Anaconda Prompt.

   EXAMPLE: To download and install a package with conda:

   ```
   conda install -c USERNAME PACKAGE
   ```

   TIP: Conda expands `USERNAME` to a URL such as `https://<your-anaconda-repo>/USERNAME`, based on the settings in the `.condarc` file.

Building and uploading new packages

Building and uploading new packages is optional, and best suited for advanced users who are comfortable using a Terminal application. It requires the anaconda-client, which is easy to get if you have installed Anaconda.

Use Terminal window or Anaconda Prompt to run the following command line commands.

1. To build and upload packages, first install the Anaconda Client CLI:

```
conda install anaconda-client
```

2. Log in to your Repository account:

```
anaconda login
```

   At the prompt, enter your Repository username and password.

3. Choose the package you would like to build. For this example, you can download our public test package:

```
git clone https://github.com/anaconda-platform/anaconda-client
cd anaconda-client/example-packages/conda/
```

4. To build your test package, first install conda-build and turn off automatic Client uploading, then run the `conda build` command:

```
conda install conda-build
conda config --set anaconda_upload no
conda build .
```

5. Find the path where the newly-built package was placed, so that you can use it in the next step:

```
conda build . --output
```

6. Upload your test package to your Repository account:

```
anaconda login
anaconda upload /your/path/conda-package.tar.bz2
```

   NOTE: Replace `/your/path/` with the path you found in the previous step.

For more information, see *Working with conda packages*.

Sharing notebooks

To upload a notebook to Anaconda Enterprise 4 Repository with anaconda-client, open Anaconda Prompt or Terminal and then enter:

```
anaconda upload my-notebook.ipynb
```

NOTE: Replace `my-notebook` with the name of your notebook.

Viewing notebooks

You can view an HTML version of your notebook in Anaconda Enterprise 4 Repository. Log in to your account, then from the drop-down menu of the view button, select Notebooks. Click the name of the notebook you want to view.

You can also view an HTML version of your notebook directly from:

```
http://<your-anaconda-repo>/USERNAME/my-notebook
```

NOTE: Replace <your-anaconda-repo> with your Repository name, USERNAME with your username and my-notebook with the name of your notebook.

Anyone who has anaconda-client and access to Repository can download your notebook. To download the notebook, open Anaconda Prompt or Terminal and enter:

```
anaconda download USERNAME/my-notebook
```

Sharing environments

A saved conda environment can be uploaded to Anaconda Enterprise 4 Repository with the web interface or the anaconda upload command.

To save the environment, run this command in an Anaconda Prompt or Terminal window:

```
conda env export -n my-environment -f my-environment.yml
```

To upload it with the web interface go to:

```
https://<your-anaconda-repo>/<USERNAME>/environments
```

Then use the Upload button in the top right corner.

To upload it with the anaconda upload command:

```
anaconda upload my-environment.yml
```

NOTE: Replace my-environment with the name of your environment.

You can view a list of your uploaded environments at:

```
http://envs.<your-anaconda-repo>/USERNAME
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository and USERNAME with your username.

Anyone who has access can download and install your environment. Open Anaconda Prompt or Terminal and then enter:

```
conda env create user/my-environment
source activate my-environment
```

NOTE: Replace user with your username and my-environment with the name of your environment.

How to...

Use packages

Find a package

From Anaconda Enterprise 4 Repository, you can search for packages by package name. From the top navigation bar of any page, in the search box enter the package name. You can filter your searches using type of the packages, access or labels and you can sort results by number of favorites or number of downloads by clicking the search results column heading.

Download and install a conda package from Repository

To install a conda package, in a Terminal window or an Anaconda Prompt run:

```
conda install -c USERNAME PACKAGE
```

NOTE: Conda expands `USERNAME` to a URL such as `https://<your-anaconda-repo>/username` based on the settings in the `.condarc` file.

NOTE: Replace `USERNAME` with your username and `PACKAGE` with the name of the desired package.

Download and install a PyPI package from Repository

To install a PyPI package, in a Terminal window or an Anaconda Prompt run:

```
pip install --index-url pypi.anaconda.org/USERNAME/PACKAGE
```

NOTE: Replace `USERNAME` with your username and `PACKAGE` with the name of the desired package.

Use the Anaconda Client CLI

Install Client

See *Installing the Anaconda Client CLI*.

Find my Client login credentials

Your credentials for Client are those that you used to create an account on Repository.

To get help:

1. In a browser, navigate to your Repository.
2. Select the **Sign In** tab.
3. Click either the I forgot my password link or the I forgot my username link.

Log in to Client

After you have downloaded and configured Client, in a Terminal window or an Anaconda Prompt, run:

```
anaconda login
```

Display a list of Client commands

In a Terminal window or Anaconda Prompt, run:

```
anaconda --help
```

Find out more about a Client command

In a Terminal window or Anaconda Prompt, run:

```
anaconda COMMANDNAME -h
```

NOTE: Replace `COMMANDNAME` with the name of the command about which you want more information.

List all available Client configuration files

In a Terminal window or Anaconda Prompt, run:

```
anaconda config --files
```

List all of your Client configuration variables

In a Terminal window or Anaconda Prompt, run:

```
anaconda config --show
```

Find out more about Client

If you have a question that you cannot answer using the help command or documentation, contact your system administrator who has access to Anaconda Enterprise Support.

Build packages

Build and upload a package

For a quick example, see *Building and uploading new packages*.

Test a built package

In a Terminal window or Anaconda Prompt, specify the `--use-local` option:

```
conda create --use-local -n test PACKAGE
```

NOTE: Replace `PACKAGE` with the name of your package.

Upload a package to Repository

In a Terminal window or Anaconda Prompt, run:

```
anaconda upload PACKAGE
```

NOTE: Replace `PACKAGE` with the name of your package.

Find help for uploading packages

You can obtain a complete list of upload options, including:

- Package channel.
- Label.
- Availability to other users.
- Metadata.

In a Terminal window or Anaconda Prompt, run:

```
anaconda upload -h
```

Tutorials

Using labels in the development cycle

Anaconda Enterprise 4 Repository *labels* can be used to facilitate a development cycle and organize the code that is in development, in testing and in production, without affecting non-development users.

In this tutorial, we show how to use a "test" label, so that you can upload files without affecting your production-quality packages. Without a `--label` argument the default label is "main."

1. You need to begin with a conda package. If you do not have one, use our example conda package. Before you build the package, edit the version in the `meta.yaml` file in `anaconda-client/example-packages/conda/` to be `2.0`:

   ```
   git clone https://github.com/anaconda-platform/anaconda-client
   cd anaconda-client/example-packages/conda/
   nano meta.yaml # Bump version to 2.0
   conda config --set anaconda_upload no
   conda build .
   ```

2. Upload your test package to Repository using the Client *upload* command. Adding the `--label` option tells Repository to make the upload visible only to users who specify that label:

```
anaconda upload /path/to/conda-package-2.0.tar.bz2 --label test
```

NOTE: Replace `/path/to/` with the path to where you stored the package.

3. You now can see that even when you search conda "main," you do not see the 2.0 version of the test package. This is because you need to tell conda to look for your new "test" label.
4. The `--override` argument tells conda not to use any channels in your `~/.condarc` file.

   The following command produces no 2.0 results:

```
conda search --override -c USERNAME conda-package
```

   NOTE: Replace USERNAME with your username.

   Your 2.0 package is here:

```
conda search --override -c USERNAME/label/test conda-package
```

   NOTE: Replace `USERNAME` with your username.

5. You can give the label `USERNAME/label/test` to your testers.

   NOTE: Replace `USERNAME` with your username.

6. Once they finish testing, you may then want to copy the test packages back to your "main" label:

```
anaconda label --copy test main
```

   Your version 2.0 is now in main:

```
conda search --override -c USERNAME conda-package
```

   NOTE: Replace `USERNAME` with your username.

You can also manage your package labels from your dashboard: `https://<your-anaconda-repo>/USERNAME/conda-package`.

NOTE: Replace `<your-anaconda-repo>` with the name of your local Repository, and `USERNAME` with your username.

If you use `anaconda-client` 1.7 or higher, you can use `anaconda move` to move packages from one label to another:

```
anaconda move --from-label OLD --to-label NEW SPEC
```

Replace OLD with the old label, NEW with the new label, and SPEC with the package to move. SPEC can be either "user/package/version/file", or "user/package/version" in which case it moves all files in that version.

Working with other file types

In addition to uploading or downloading *packages*, you can also upload or download other file types to/from Anaconda Enterprise 4 Repository.

Uploading other file types

You can upload any type of file with *Anaconda Client command line interface* (CLI) by using the steps below.

PyPI package files, conda package files and notebook files are automatically detected. There is no auto-detect for other types of files, so you must explicitly specify the `package`, `package-type` and `version` fields.

In the following example, we upload a spreadsheet named `baby-names` in comma separated value (CSV) format.

1. Create a new package, which creates a *Namespace* that can hold multiple files:

```
anaconda login
anaconda package --create jsmith/baby-names
```

2. Upload the file to the new namespace:

```
anaconda upload --user jsmith --package baby-names --package-type file --version 1␣
↪baby-names1.csv
```

NOTE: In this example:

- The user or organization name is "jsmith."
- The package name is "baby-names."
- The package type is "file."
- The version is "1."
- The full filename is `baby-names1.csv`.

Downloading other file types

Files, such as the one created above, are available at:

```
https://<your-anaconda-repo>/USERNAME/PACKAGE
```

Anyone can download these files using Client:

```
anaconda download USERNAME/PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, `USERNAME` with the desired username and `PACKAGE` with the desired package name.

If the repository has multiple files with the same name and different extensions, `anaconda download` will download all of them by default. If you use `anaconda-client` 1.7 or higher, you can use `anaconda download` with the option `--package-type` or `-t` to specify only one of these files. This option can work with the values `pypi`, `conda`, `ipynb`, and `env`.

Tasks

This guide covers all the everyday tasks for a user of Anaconda Enterprise 4 Repository.

Creating an account

The information below applies to personal Anaconda Enterprise 4 Repository accounts. For information on organization accounts, see *Working with organizations*.

You do not need an Anaconda Enterprise 4 Repository account to find, download and use packages.

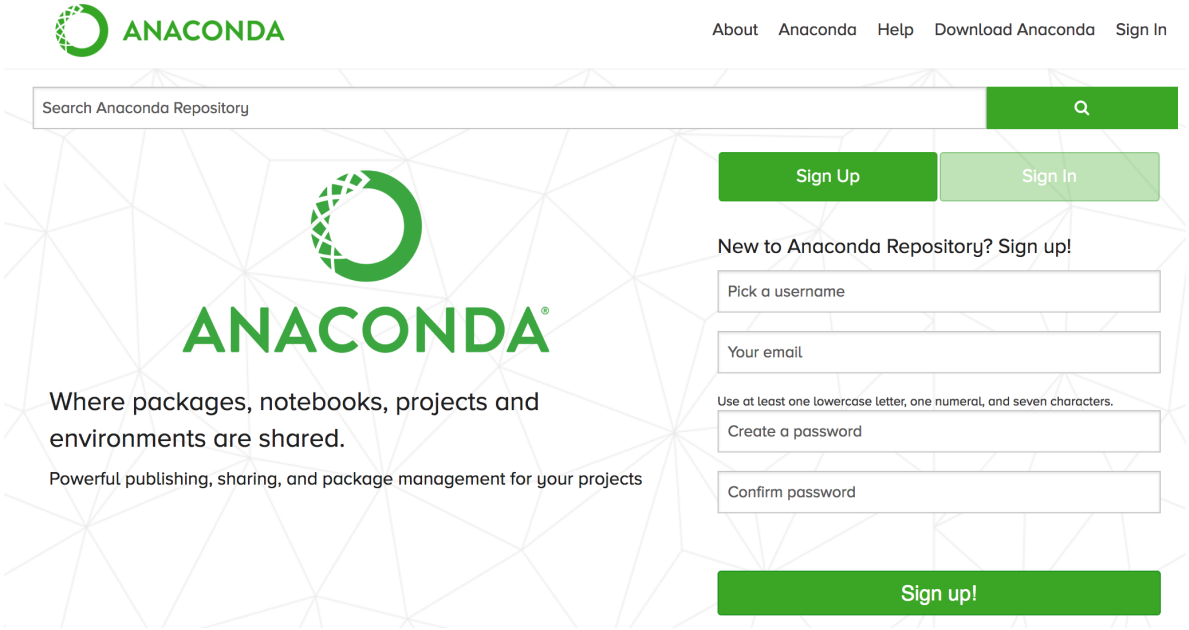
However, you do need a Repository account to:

- Author packages.
- Upload packages, notebooks and environments.
- Access private packages that are shared with you.
- Create organizations.

If your administrator sent you an email with a login address, username and password, use them.

Otherwise, to sign up for an Anaconda Enterprise 4 Repository account:

1. In a browser, go to the address your administrator gave you.



2. Make sure the **Sign Up** tab is active.

   NOTE: There is also a **Sign In** tab for existing users.

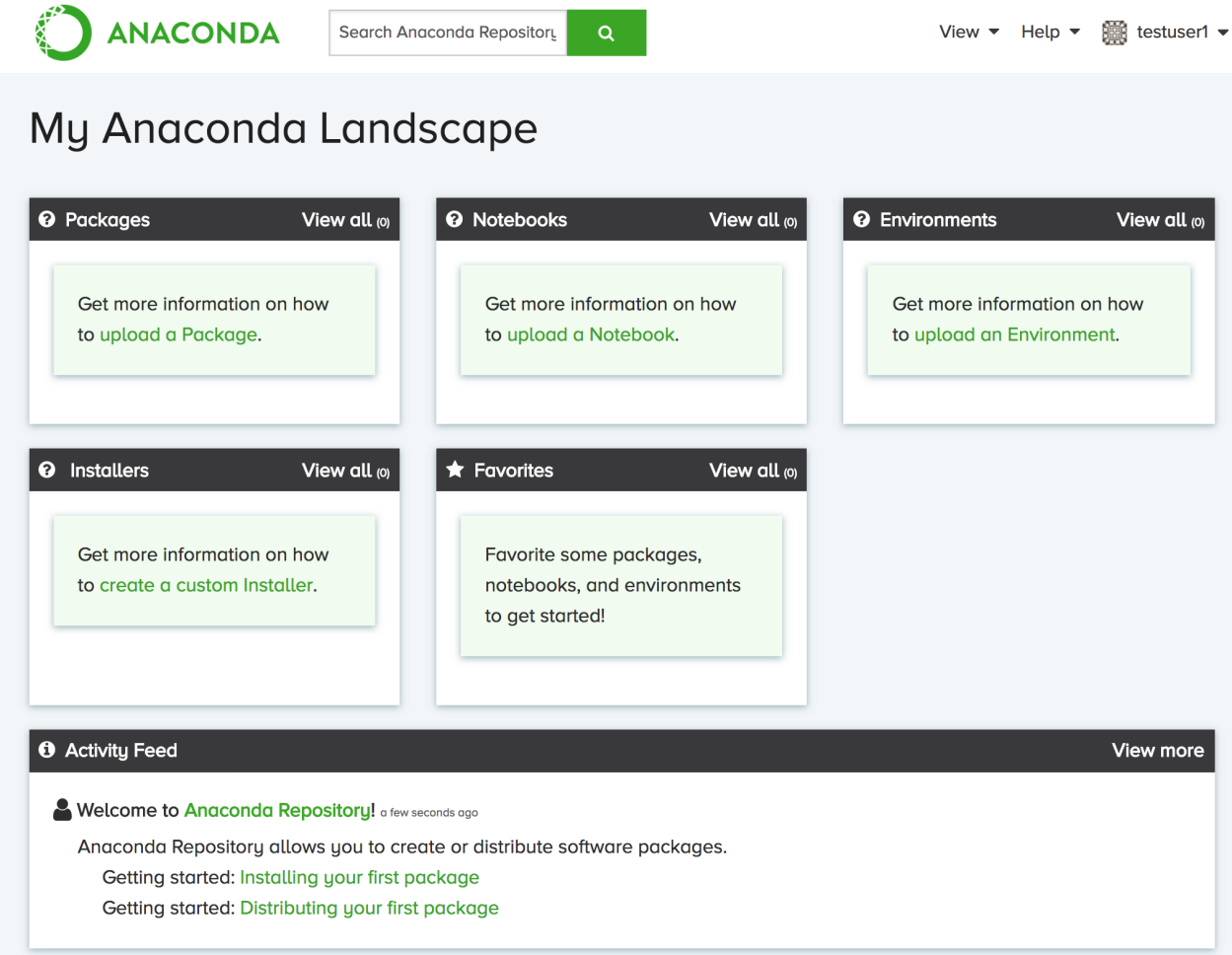
3. Select a username.
4. Enter your email address.
5. Create a password that is at least 7 characters long.
6. Enter the password again to confirm it.
7. Read and accept the Terms and Conditions.

8. Click the Sign up button.

   The system creates your user account, logs you in and displays your *personal dashboard*.

Using your Repository dashboard

When you log in to Repository, your personal dashboard is displayed.



In the top navigation bar, the currently active user or organization is shown at the far right.

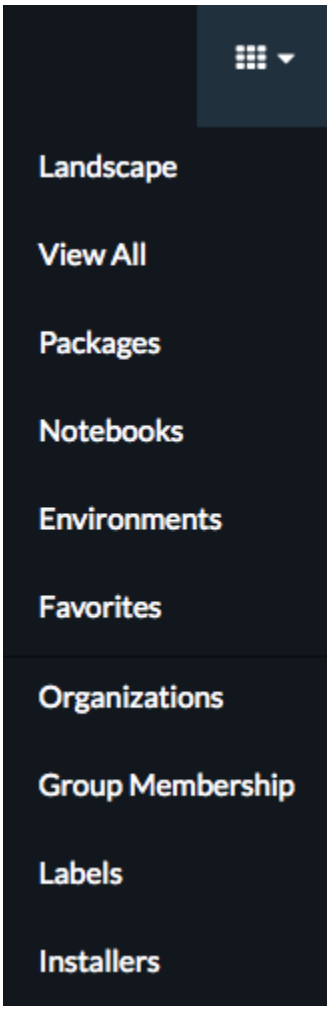
TIP: If the email address on your account is associated with a Gravatar account, Repository displays your profile photo. To associate your email address with Gravatar or to change your Gravatar profile photo, see gravatar.com.

Packages, notebooks, environments, projects and installers that you have created with this account appear on your Landscape.

Click the view button to see the following options:

- Landscape: Your home page.
- Favorites: Other users' packages that you have starred.
- Packages: Only packages you have created.
- Notebooks: Only notebooks you have created.
- Environments: Only environments you have created.

- Installers: If you have created and uploaded installers using *Cloudera*, they are displayed here.
- Projects: If you have created and uploaded *projects*, they are displayed here.



Installing the Anaconda Client CLI

You can use the Anaconda Client command line interface (CLI) in an Anaconda Prompt or Terminal window to:

- Connect to and manage your Anaconda Enterprise 4 Repository account.
- Upload *packages* you have created.
- Generate access *tokens* to allow access to private packages.

NOTE: Anaconda Client is not necessary to search for and download packages.

Anaconda Client requires conda to be installed. If you have Anaconda, conda is already installed.

To install with conda, open Anaconda Prompt or Terminal window and enter:

```
conda install anaconda-client
```

After installing, view the complete list of Client tasks with this command from Anaconda Prompt or Terminal window:

```
anaconda -h
```

Working with organizations

Creating an organization

1. Log in to your Anaconda Enterprise 4 Repository.
2. From the far-right drop-down menu next to your username, select New Organization.
3. Scroll to the "Create Organization" box and enter a name for your organization.

   NOTE: Organization names can include dashes, but not spaces or special characters.
4. Supply an email address for the organization, then click the Create Organization button.

   The system displays the dashboard for the new organization.

As the creator and owner of an organization, you have automatic administrative access to this organization and any packages associated with the organization.

From the far-right drop-down menu, Profile option shows a list of all organizations to which you belong.

Uploading packages to an organization

Only the co-owners of an organization may upload packages to the organization.

To upload a package to an organization, in a Terminal or Anaconda Prompt use the `-u/--user` option:

```
anaconda upload --user ORGANIZATION package.tar.bz2
```

NOTE: Replace `ORGANIZATION` with the name of the organization, and `package.tar.bz2` with the name of the package.

Transferring packages to an organization

See *Transferring a package to a new owner*.

Customizing users and groups

Only the co-owners of an organization may customize users and groups of the organization.

To add, remove, or edit group and user access for an organization you administer:

From the top right drop-down menu, select Groups, then click the name of the group you want to edit.

In the Members box, type the username of the user you want to add as a member, thenc lick the Add button.

To remove a member, in the list on the Members page, click the delete icon (trash can).

Users receive a dashboard notification when you add them to an organization.

Creating groups for differing access levels

Within an organization, you can create a group to customize access for a group of users:

1. From the top right drop-down menu, select Groups, then click the + New Group button.
2. Give the group a name and click the Create group button.
3. In the Members box, add the desired members by username.
4. Add installers, packages, notebooks, projects or environments that this group can access.
5. Click the Save Group button.

Deleting an organization

To delete an organization you administer and erase all data associated with it:

1. At the top right of the Repository interface, in the Profile list, select Switch To.
2. Select the organization you want to delete.
3. In the Profile list, select Settings.
4. Select the Account option. You may be asked to verify your password.
5. In the Delete Account section, click the Delete button.

   A confirmation page requests that you provide the full name of the organization.

Working with packages

All files uploaded to Anaconda Enterprise 4 Repository are stored in *packages*. Each Repository package is visible at its own unique URL based on the name of the user who owns the package and the name of the package. You can create a Repository package and then upload files into it.

Each user and organization has their own location called a *Namespace* where they may host packages.

A *Label* is part of the URLs for Repository where conda looks for packages. Each file within a package may be tagged with one or more labels, or not tagged at all to accept the default label of `main`. Labels are searched only if you specify a label.

Using package managers

Repository supports two package managers, conda and PyPI. To work with conda or PyPI packages, you must use their corresponding subdomains.

EXAMPLE: To install conda packages from the user "travis," use the Repository URL:

```
https://conda.<your-anaconda-repo>/travis
```

EXAMPLE: To install PyPI packages from the user "travis," use the Repository URL:

```
https://pypi.<your-anaconda-repo>/travis
```

Working with conda packages

Building a conda package

To build a package using `conda build`:

1. Install Anaconda Client and conda build:

```
conda install anaconda-client conda-build
```

2. Choose the repository for which you would like to build the package. In this example, we use a simple, public conda test package:

```
git clone https://github.com/anaconda-platform/anaconda-client
cd anaconda-client/example-packages/conda/
```

   In this directory, there are two required files, build.sh, and meta.yaml.

   NOTE: Linux and macOS systems are Unix systems. Packages built for Unix systems require a `build.sh` file, packages built for Windows require a `bld.bat` file, and packages built for both Unix and Windows systems require both a `build.sh` file and a `bld.bat` file. All packages require a `meta.yaml` file.

3. To build the package, turn off automatic Client uploading and then run the `conda build` command:

```
conda config --set anaconda_upload no
conda build .
```

   All packages built in this way are placed in a subdirectory of *Anaconda's* `conda-bld` directory.

4. You can check where the resulting file was placed with the `--output` option:

```
conda build . --output
```

For more information on conda's overall build framework, you may also want to read the articles Building conda packages and Tutorials on conda build.

Uploading a conda package

Upload the test package to Repository with the *anaconda upload* command:

```
anaconda login
anaconda upload /path/to/conda-package.tar.bz2
```

NOTE: Replace `/path/to/` with the path to where you stored the package.

Installing conda packages

You can install conda packages from Repository by adding channels to your conda configuration.

1. Because conda knows how to interact with Repository, specifying the channel "sean" translates to `https://<your-anaconda-repo>/sean`:

```
conda config --add channels sean
```

2. You can now install public conda packages from Sean's Repository account. Try installing the testci package at `https://<your-anaconda-repo>/sean/testci`:

```
conda install testci
```

You can also install a package from a channel with a token and a label:

```
conda install -c https://conda.anaconda.org/t/<token>/<channel>/label/<labelname>
↪<package>
```

NOTE: Replace <token> with the provided token,``<channel>`` with the user channel, <labelname> with the label name and <package> with the package name you want to install.

Working with PyPI packages

Uploading PyPI packages

You can test PyPI package uploading with a small, public example package saved in the anaconda-client repository:

1. Begin by cloning the repository from the command line:

```
git clone git@github.com:anaconda-platform/anaconda-client.git
cd anaconda-client/example-packages/pypi/
```

2. You can now create your PyPI package with the `setup.py` script:

```
python setup.py sdist
```

3. Your package now is built as a source "tarball" and is ready to be uploaded with:

```
anaconda upload dist/*.tar.gz
```

Your package is now available at:

```
http://<your-anaconda-repo>/USERNAME/PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, USERNAME with your username and PACKAGE with the package name.

Installing PyPI packages

The best way to install a PyPI package is using pip. For the following command, you can use the package you authored in the above steps:

```
pip install --extra-index-url https://pypi.<your-anaconda-repo>/USERNAME/PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, USERNAME with your username and PACKAGE with the test-package name.

Using cross-platform "noarch" packages

As of Anaconda Enterprise 4 Repository version 2.6.0, your Repository supports conda "noarch" packages that contain no operating system-specific files.

The conda build system allows you to specify "no architecture" when building a package, so it is compatible with all platforms and architectures. Noarch packages from your Repository instance can be downloaded and installed on any platform.

NOTE: Noarch packages are not compatible with Anaconda constructor. If you intend to use the packages with Anaconda constructor, build the packages for specific operating systems.

Building noarch packages

To specify a noarch build, use the `noarch` key in the `build` section of your conda recipe's `meta.yaml` file:

```
build:
      noarch: generic
```

See the conda documentation for full information on noarch packages.

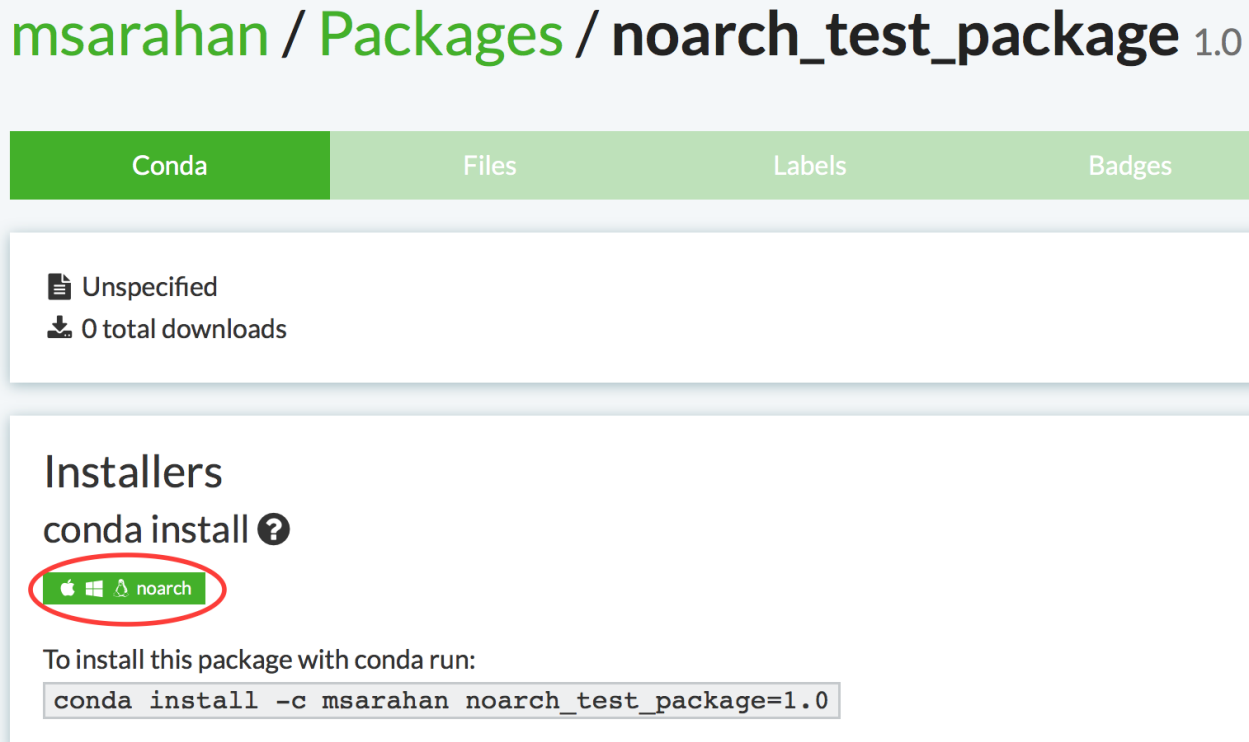
Additional examples can be found in the conda-recipes repository on github.

Uploading noarch packages

You can upload noarch packages to Repository in the same manner as any other package:

```
anaconda upload babel
```

Noarch packages are identified on Repository by a cross-platform icon:



Uploading a package

To upload a package to Repository, using the Client CLI, run the *upload* command:

```
anaconda login
anaconda upload PACKAGE
```

NOTE: Replace `PACKAGE` with the name of the desired package.

Repository automatically detects packages and notebooks, package or notebook types, and their versions.

Your package is now available at:

```
https://<your-anaconda-repo>/USERNAME/PACKAGE
```

NOTE: `<your-anaconda-repo>` is the name of your local Repository, `USERNAME` is your username and `PACKAGE` is the package name.

Anyone can download your package by using Client:

```
anaconda download USERNAME/PACKAGE
```

NOTE: `USERNAME` is their username, and `PACKAGE` is your package name.

If you want to restrict access to your package, see *Controlling access to packages*.

Controlling access to packages

By default, all packages, notebooks and environments uploaded to Repository are public, meaning they are accessible to anyone who has access to Repository.

When you *make a package private*, only you and the users you authorize can access it.

You can authorize users to access your private package in two ways:

- *Use a group* inside an organization account—only group members who are logged in can access the package. This is the best way to control access to your private packages because it allows you to set separate permissions for each package, notebook or environment.
- *Use a token control system*—only users who have the appropriate *token* can access the private package or channel.

After you grant other users access, they can *download and install* your package using the Web UI or Client.

Making a package private

1. In the Web UI, in the **Tools** menu, select Packages.
2. OPTIONAL: If the packages you are looking for are not visible, under Filters, in the Type list, select All.
3. Select the checkbox next to each package you want to make private.
4. Click the **Settings** tab, and then click the **Admin** tab in the sidebar.

   NOTE: You can also reach this page at the following URL:

   ```
   https://<your-anaconda-repo>/USERNAME/PACKAGE/settings/admin
   ```

   Replace <your-anaconda-repo> with the name of your local Repository, USERNAME with your username and PACKAGE with the name of the package.
5. Click Set access, then select Private.

NOTE: You can use the same procedure and URL to make Jupyter Notebooks and conda environments private.

Using groups to allow access to private packages

1. *Create an organization*.
2. *Upload* or *transfer* the package to the organization.
3. Within the organization, *create a group* with the appropriate users, permissions, and packages.

Creating a token to allow access to a private package or channel

You can control access to private packages and channels with the *token* system. All Repository URLs can be prefixed with /t/<token> to allow access.

The degree of access a token grants is completely configurable when you generate it. You can generate multiple tokens to control which groups of users have access to certain features if they have the appropriate token.

Tokens provide access to all packages in a specified channel. Separate permissions per package, notebook or environment may be better handled with *organizations and groups*.

You can generate tokens using the Web UI or Anaconda Client.

NOTE: By default, tokens expire after one year.

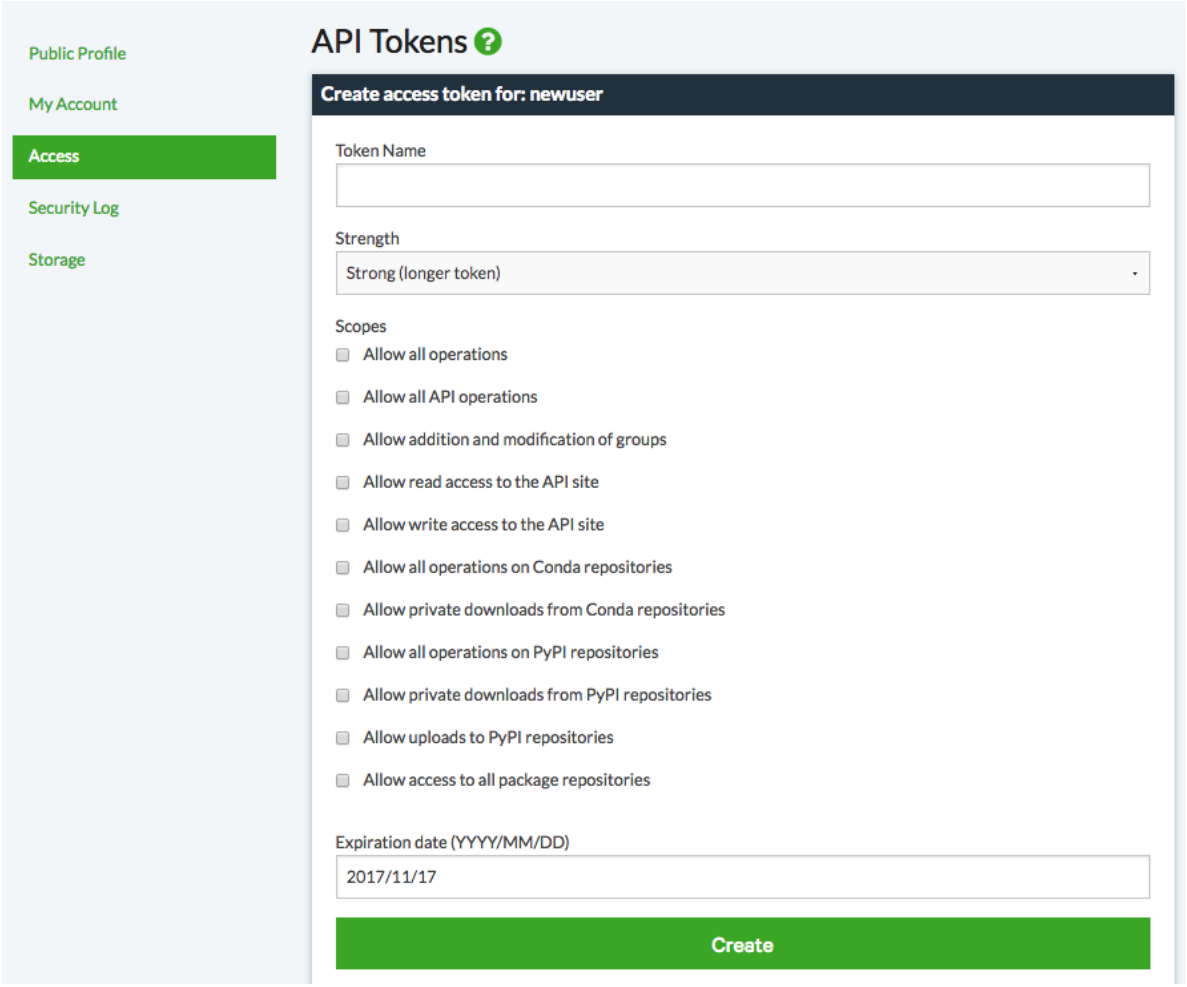
Generating a token in the Web UI

1. Navigate to:

   ```
   https://<your-anaconda-repo>/<channel>/settings/access
   ```

   NOTE: Replace <your-anaconda-repo> with the name of your local Repository, and <channel> with the name of the desired channel.

2. In the Token Name box, type a name for the token:



3. Select the appropriate checkboxes for the type of access you want to allow for users of this token.

   EXAMPLE: To allow users to download private packages or packages from private channels, select Allow private downloads from Conda repositories.

4. Click the Create button.

Generating a token with Client

1. In a Client Terminal window or Anaconda Prompt, run:

```
anaconda auth --create --name YOUR-TOKEN-NAME --scopes 'repos conda:download'
```

NOTE: Replace `YOUR-TOKEN-NAME` with a name for the new token.

Provide scopes as a space-separated, quoted list. The token produced by the above command provides access to download any of your private conda repositories. The available scopes are:

- `all`: Allow all operations.
- `api`: Allow all API operations.
- `api:modify-group`: Allow addition and modification of groups.
- `api:read`: Allow read access to the API site.
- `api:write`: Allow write access to the API site.
- `conda`: Allow all operations on conda repositories.
- `conda:download`: Allow private downloads from conda repositories.
- `pypi`: Allow all operations on PyPI repositories.
- `pypi:download`: Allow private downloads from PyPI repositories.
- `pypi:upload`: Allow uploads to PyPI repositories.
- `repos`: Allow access to all package repositories.

2. You can enable the token with the `conda config` command:

```
conda config --add channels https://conda.anaconda.org/t/<token>/<channel>
```

Or to add a channel with a token and label:

```
conda config --add channels https://conda.anaconda.org/t/<token>/<channel>/label/
↪<labelname>
```

NOTE: Replace `<token>` with your token string,``<channel>`` with the desired channel name, and `<labelname>` with the label name.

NOTE: If you lose the token's random alphanumeric string, you must *revoke the token* and create a new one.

Using a token

The token can be used to:

- Add a channel from which to install private packages:

```
conda config --add channels https://conda.<your-anaconda-repo>/t/<token>/<channel>
```

NOTE: Replace `<your-anaconda-repo>` with the name of your local Repository, `<token>` with the provided token and `<channel>` with a user channel.

- Install a private package without first adding a channel:

```
conda install -c https://conda.<your-anaconda-repo>/t/<token>/<channel> <package>
```

To install a package from a channel using a token and a label name:

```
conda install -c https://conda.<your-anaconda-repo>/t/<token>/<channel>/label/
↪<labelname> <package>
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, <token> with the provided token, <channel> with a user channel, <labelname> with the label name and <package> with the name of the package to install.

- Install a private PyPI package:

```
pip install --index-url https://pypi.<your-anaconda-repo>/t/<token>/<channel>/
↪PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, <token> with the provided token, <channel> with a user channel and PACKAGE with the name of the desired package.

NOTE: Private PyPI packages can also be installed using:

```
https://pypi.<your-anaconda-repo>/t/<token>/<channel>
```

Revoking a token

You can revoke tokens using the Web UI or Client.

To revoke a token using the Web UI, from the far-right drop-down menu, select My Settings, then from the left navigation select Access.

At the bottom of the page, you will see a list of all tokens you have generated. Click the name of the token you want to revoke, then in the dialog box that appears, click the Revoke Token button.

Or to revoke a token using Client, run:

```
anaconda auth -r YOUR-TOKEN-NAME
```

NOTE: Replace YOUR-TOKEN-NAME with the name of the token you want to revoke.

Downloading and installing a package

To download a package using the Web UI, in a web browser, navigate to the organization's or user's channel.

To download a package using Client:

- Run:

```
conda install anaconda-client
anaconda login
conda install -c OrgName PACKAGE
```

NOTE: Replace OrgName with the organization or username and PACKAGE with the package name.

- Or run:

```
conda install anaconda-client
anaconda login
conda install -c https://conda.<your-anaconda-repo>/OrgName PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, OrgName with the organization name or username and PACKAGE with the package name.

Transferring a package to a new owner

When you create or add a package, by default it is attached to your individual profile. You can transfer ownership to another owner account you control, such as an organization profile you manage.

To transfer a package to a new owner:

1. On your dashboard—or the dashboard of an organization you administer—select the package for which you want to transfer ownership.

   The system displays options for that package.

2. To display the package settings, select the Settings option.
3. Select the Admin option.
4. Under Transfer this package to a new owner, click the Transfer button.
5. Select the organization name for the new owner.
6. Click the Transfer Ownership button.

Adding and removing collaborators

You can add other users that are not part of an organization to collaborate on your packages. You need the usernames of the other users. You can also remove collaborators at any time.

All collaborators have full read/write permissions to the package, even if the package is private.

1. On your dashboard, click the package name.
2. Select the Settings option.
3. In the package settings, select the Collaborators option.
4. To add a collaborator, in the current collaborators, type the username of the person you want to add, then click the Add button.
5. To remove a collaborator, click the red X button next to the collaborator name.

Removing a previous version of a package

To remove a previous version of one of your packages from Repository:

1. On your dashboard, click the package name.
2. Select the **Files** tab.
3. Select the checkbox to the left of the version you want to remove.
4. In the **Actions** menu, select Remove.

You can also use the Client CLI to remove a previous version of a package:

```
anaconda remove jsmith/testpack/0.2
```

NOTE: Replace `jsmith` with your username, `testpack` with the package name and `0.2` with the desired version.

You can now see the change on your profile page:

```
https://<your-anaconda-repo>/USERNAME/PACKAGE
```

NOTE: Replace <your-anaconda-repo> with the name of your local Repository, `USERNAME` with your username and `PACKAGE` with the package name.

Copying a package

To copy a package from the channel `conda-forge` to a personal channel such as `jsmith`:

```
anaconda copy conda-forge/glueviz/0.10.4 --to-owner jsmith
```

`conda-forge/glueviz/0.10.4` is a "spec" and can match either of two formats: `user/package/version` or `user/package/version/filename`.

In case the package `glueviz/0.10.4` already exists for user `jsmith`, you will receive the following error message: `File conflict while copying!`. If you want to copy the package anyway, try using the `--replace` or `--update` options. Using the `replace` option allows you to overwrite an already existing package. Using the `update` option allows you to add missing metadata to an existing package.

Deprecated options

Previously labels were called "channels", and the `anaconda copy` command has deprecated options `from-channel` and `to-channel` that expect to operate on labels.

These deprecated options should not be used.

If you attempt to use them in a command such as `anaconda copy --from-channel conda-forge --to-channel jsmith glueviz`, you will get an error that `Label conda-forge does not exist`.

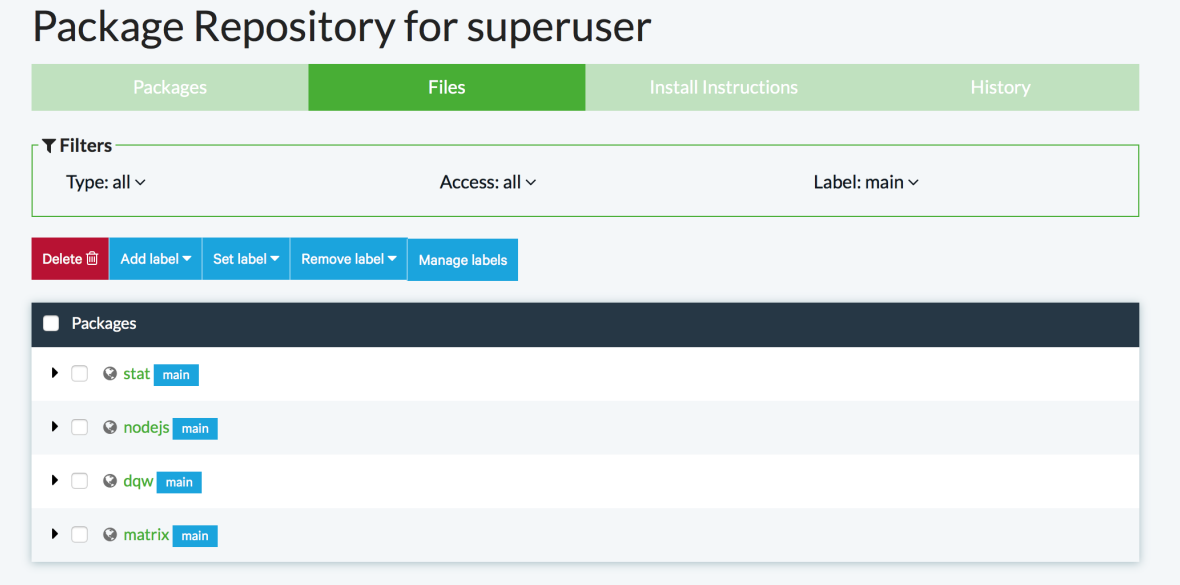
Deleting files from a package

You can delete individual files from a package in Repository, without deleting the entire package.

CAUTION: There is no undo for deleting a file.

To delete individual files from a package in Repository:

1. Access Repository using the Web UI.
2. In the **Tools** menu, select Packages.
3. Click the **Files** tab.
4. OPTIONAL: If the files you want to delete are not visible, under Filters, in the Type list, select All.



5. To select individual files, expand the package in which the files are located.
6. Select the checkboxes next to the files you want to delete.
7. Click the Delete button.
8. Enter your account name in the confirmation window.
9. Click Delete to permanently delete the selected files.

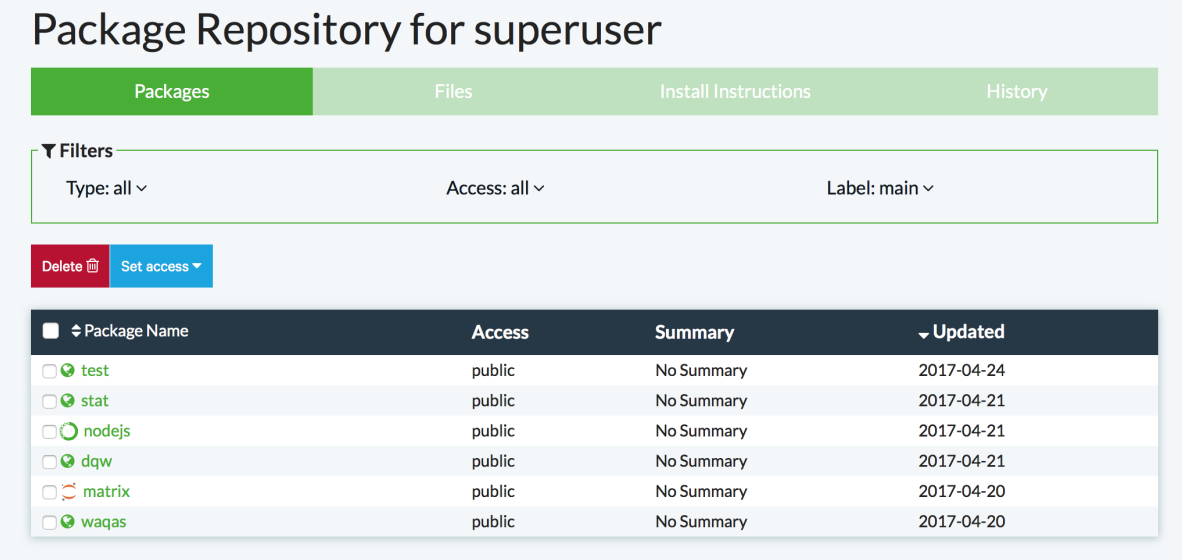
Deleting a package

You can delete an entire package from Repository, including all of its versions.

CAUTION: There is no undo for deleting a package.

To delete a package from Repository:

1. Access Repository using the Web UI.
2. In the **Tools** menu, select Packages.
3. OPTIONAL: If the packages that you want to delete are not visible, under Filters, in the Type list, select All.



4. Select the checkbox next to the packages you want to delete.
5. Click the Delete button.
6. Enter the account name in the confirmation window.
7. Click Delete to permanently delete the selected package(s).

You can also use the Client CLI to delete a package:

```
anaconda remove jsmith/testpak
```

NOTE: Replace `jsmith` with your user name, and `testpak` with the package name.

You can now see the change on your profile page:

```
https://<your-anaconda-repo>/USERNAME
```

NOTE: Replace `<your-anaconda-repo>` with the name of your local Repository and `USERNAME` with your username.

Also see the tutorial *Using labels in the development cycle*.

Working with Jupyter notebooks

As of Anaconda Enterprise 4 Repository version 2.3.0, you can upload and download Jupyter notebooks like other files.

You can also view a static copy of notebooks in Repository. The ability to run notebooks inside Repository will become available in a future release.

To run notebooks, use Anaconda Navigator or AE Notebooks server.

Uploading a notebook

The default maximum allowed size for notebooks is 25 MB. This limit can be changed by setting the *MAX_IPYNB_SIZE* variable in the `config.yaml` file.

To upload a notebook to your user account, at the Anaconda Prompt or in a Terminal window, run:

```
anaconda upload -p my-notebook my-notebook.ipynb
```

NOTE: Replace `my-notebook` with the name of the notebook you want to upload.

To upload a new version of your notebook, while retaining the original version, upload it with the version switch from a Terminal window or an Anaconda Prompt:

```
anaconda upload -p my-notebook -v 1.1 my-notebook.ipynb
```

NOTE: Replace `my-notebook` with the name of the notebook you want to upload.

Finding a notebook

You can view an HTML version of your notebook at:

```
http://notebooks.<your-anaconda-repo>/USERNAME/my-notebook
```

NOTE: Replace `<your-anaconda-repo>` with the name of your local Repository, `USERNAME` with your username and `my-notebook` with the name of your notebook.

To see another user's notebook, browse to the associated user account on your Repository installation.

Downloading a notebook

Anyone with access to Repository can download your notebook using the Anaconda Prompt or Terminal window:

```
anaconda download USERNAME/my-notebook
```

NOTE: Replace `USERNAME` with your username, and `my-notebook` with the name of your notebook.

Working with environments

A saved conda environment can be uploaded to Anaconda Enterprise 4 Repository with the web interface or the `anaconda upload` command.

- To save the environment, run this command in an Anaconda Prompt or Terminal window:

  ```
  conda env export -n my-environment -f my-environment.yml
  ```

- To upload it with the web interface go to:

  ```
  https://<your-anaconda-repo>/<USERNAME>/environments
  ```

  Then use the Upload button in the top right corner.

- To upload it with the `anaconda upload` command:

```
anaconda upload -f my-environment.yml
```

NOTE: Replace `my-environment` with the name of your environment.

- You can view a list of your uploaded environments in the web interface at:

```
    http://envs.anaconda.org/USERNAME

NOTE: Replace ``USERNAME`` with your username.
```

- Anyone who has access can download and install your environment. Open a Terminal window or an Anaconda Prompt and then enter:

```
conda env create user/my-environment
source activate my-environment
```

NOTE: Replace `my-environment` with the actual name of your environment.

Working with projects

You can add Anaconda Projects to Anaconda Enterprise 4 Repository. Projects can be any directory of code and assets. For example, projects often contain notebooks or Bokeh apps.

Adding a project

Use the Anaconda Client to add a project to Repository.

Accessing and managing a project

1. Access Repository using the Web UI.
2. From the drop-down menu of the view button, select Projects.

   The Projects page shows your existing projects.
3. Click on a project to display the Details page for that project, including the files, revisions, history and settings for the project.
4. Under Settings for an individual project, you can change options, set groups and collaborations, and manage administration of the project, including making it public, private or authenticated, transferring membership, or deleting it.

Working with Cloudera Manager parcels

Anaconda Enterprise 4 Repository provides a way to integrate with Cloudera Manager to distribute your Anaconda data science artifacts to your Hadoop cluster.

Creating parcels, management packs and installers

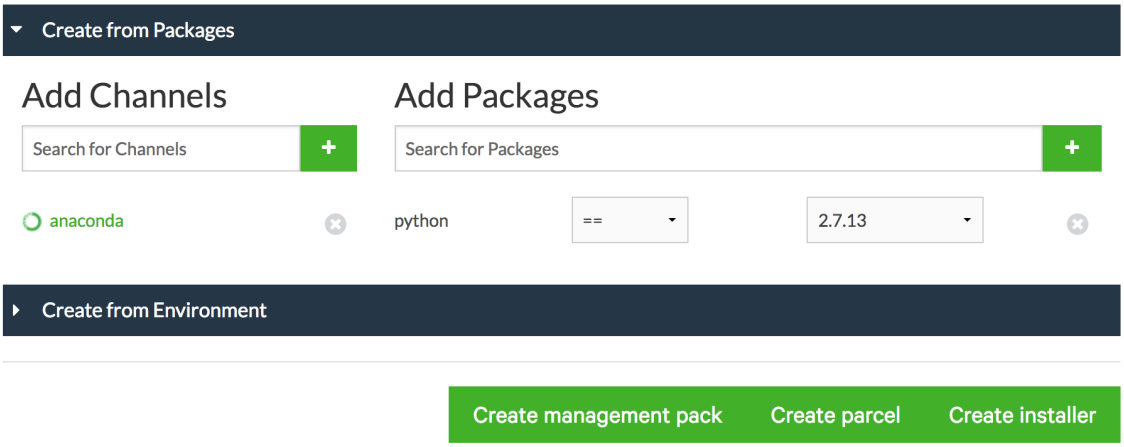
You can create custom Cloudera Manager parcels with the packages you want, including your own packages.

NOTE: Creating custom parcels requires a local mirror of the Anaconda packages.

When creating a parcel, Repository generates a 64-bit Linux installer including the specified packages and a file named `construct.yaml`, which can be used with conda constructor.

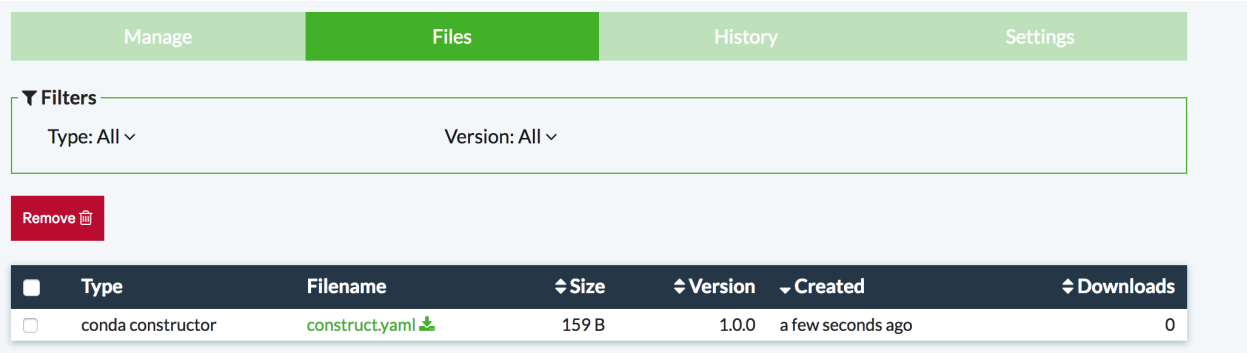
To create a custom parcel, management pack or installer:

1. From the view button, select Installers.
2. Click the Create new installer button.



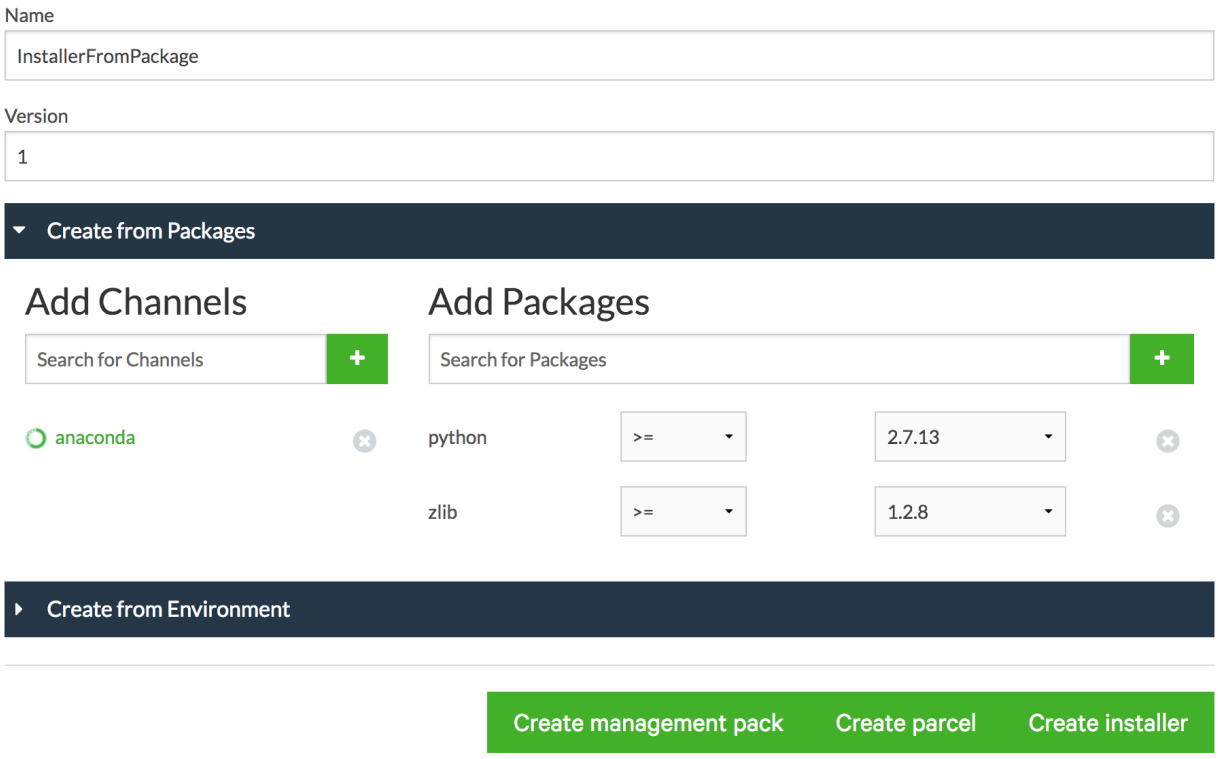
NOTE: Use only letters, numbers, dashes and underscores in the installer name.

When creating a parcel, Anaconda Enterprise 4 Repository generates a 64-bit Linux installer with the specified packages, and a file named `construct.yaml` which can be used with conda constructor.



To create just the installer script, click **Create installer**; to create a parcel, click **Create parcel**.

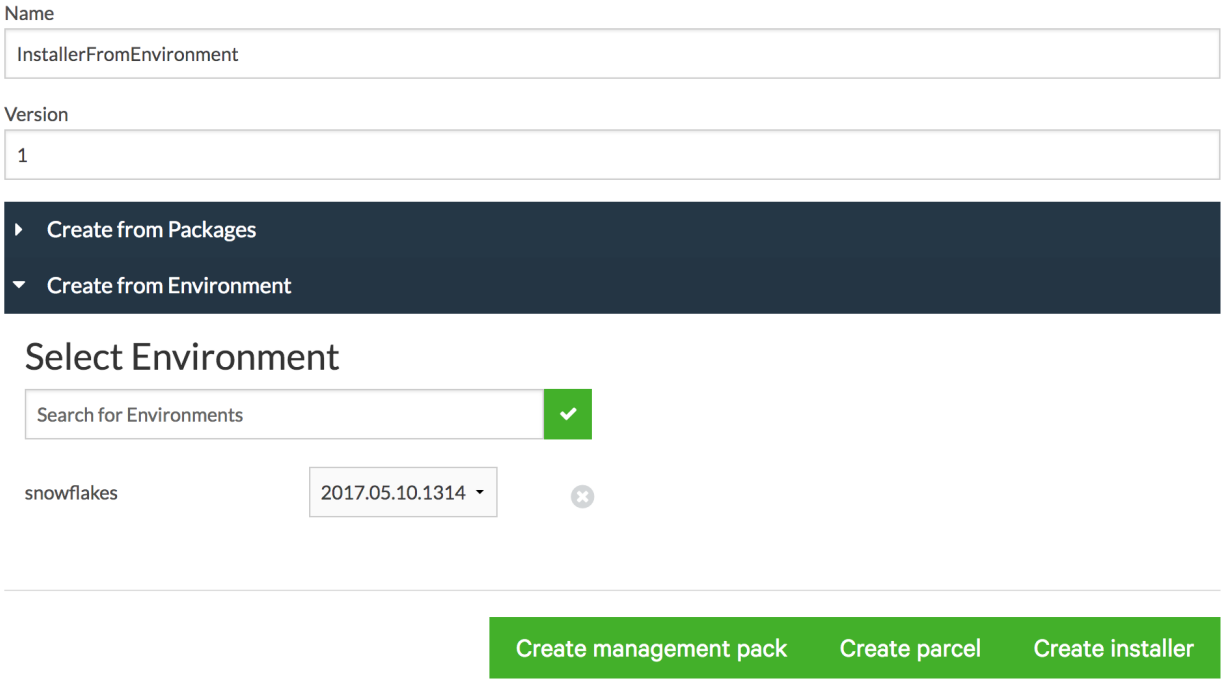
Creating a parcel by selecting packages



1. Click the **Create from Packages** tab.
2. Add channels from which to fetch packages into the Search for Channels box. Add each channel by clicking the green + (plus) button next to the Search for Channels box.

   NOTE: The `anaconda` user is added by default.
3. Add package names into the Search for Packages box. Add each package by clicking the green + (plus) button next to the Search for Packages box.
4. Set version requirements for each package using the list next to the package name.

Creating a parcel by selecting an environment



1. Click the **Create from Environment** tab.
2. Type the environment name and click the green checkbox button.
3. Select the environment version from the list next to the environment name.
4. Click the Create management pack button, Create parcel button or Create installer button.

NOTE: By default, conda is not included in a custom parcel. To add additional packages to your environment, you can add them using the Repository Web UI.

A parcel is generated with the prefix of `/opt/cloudera/parcels/PARCEL_NAME`. This is the default location where activated parcels are loaded. If you are deploying parcels in a different directory, you can change this prefix with the PARCELS_ROOT *configuration setting*.

Viewing a list of packages in a custom parcel

To see a list of packages included in your custom parcel, see:

```
/opt/cloudera/parcels/PARCEL_NAME/meta/parcel.json
```

NOTE: Replace PARCEL_NAME with the name of the desired parcel.

Distributing custom parcels

After you have created a custom parcel, you can distribute it to your cluster by adding `http://<repository ip>:<port>/USERNAME/installers/parcels/` as a Remote Parcel Repository URL.

NOTE: Replace `<repository ip>` with the Repository IP address, `<port>` with the port address and `USERNAME` with your user name.

Cloudera Manager detects the parcels hosted on Repository and provides the option to download and distribute the parcels.

By default, Repository generates a parcel file for every compatible distribution.

You can customize which parcel distributions are created by configuring the PARCEL_DISTRO_SUFFIXES *configuration setting*.

NOTE: If you have configured conda via `~/.condarc` on your server for use of a proxy—for example, to mirror behind a proxy—you must disable proxying for Repository. For more information, see the conda documentation.

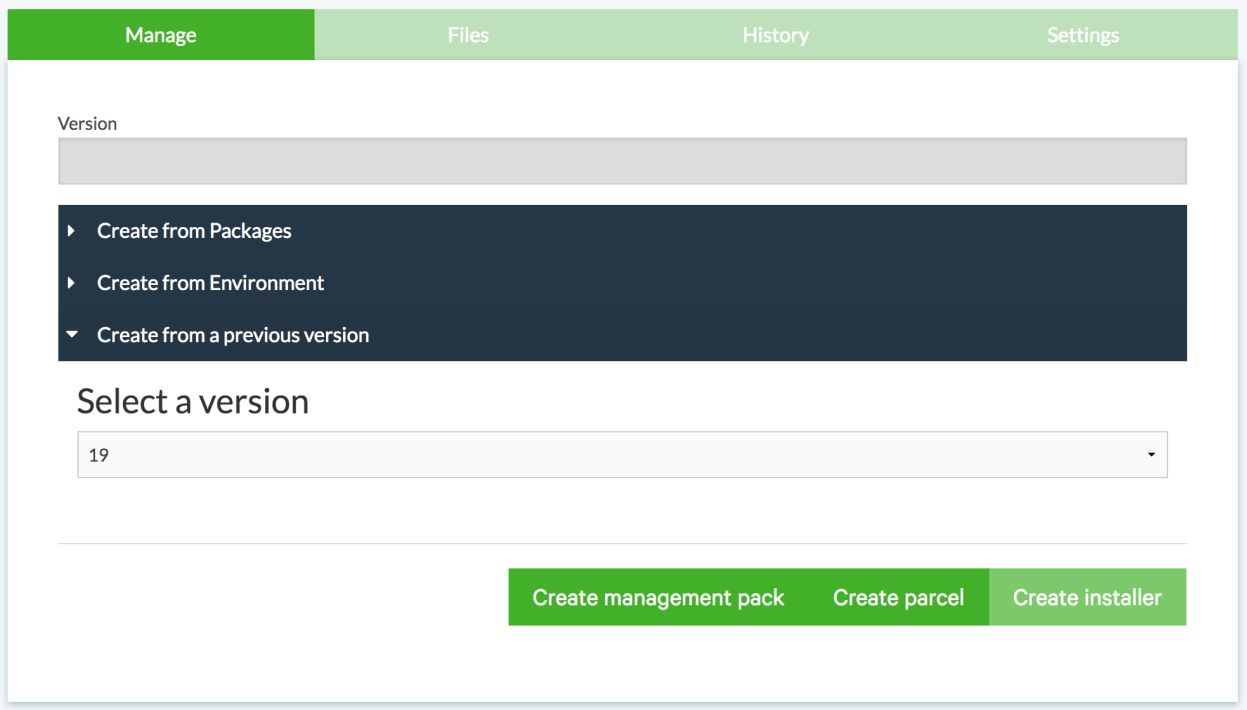
EXAMPLE:

```
proxy_servers:
    https: http://proxy.corp.example.com
    http: http://proxy.corp.example.com
    'http://<repository ip>': false
```

Creating from a previous version

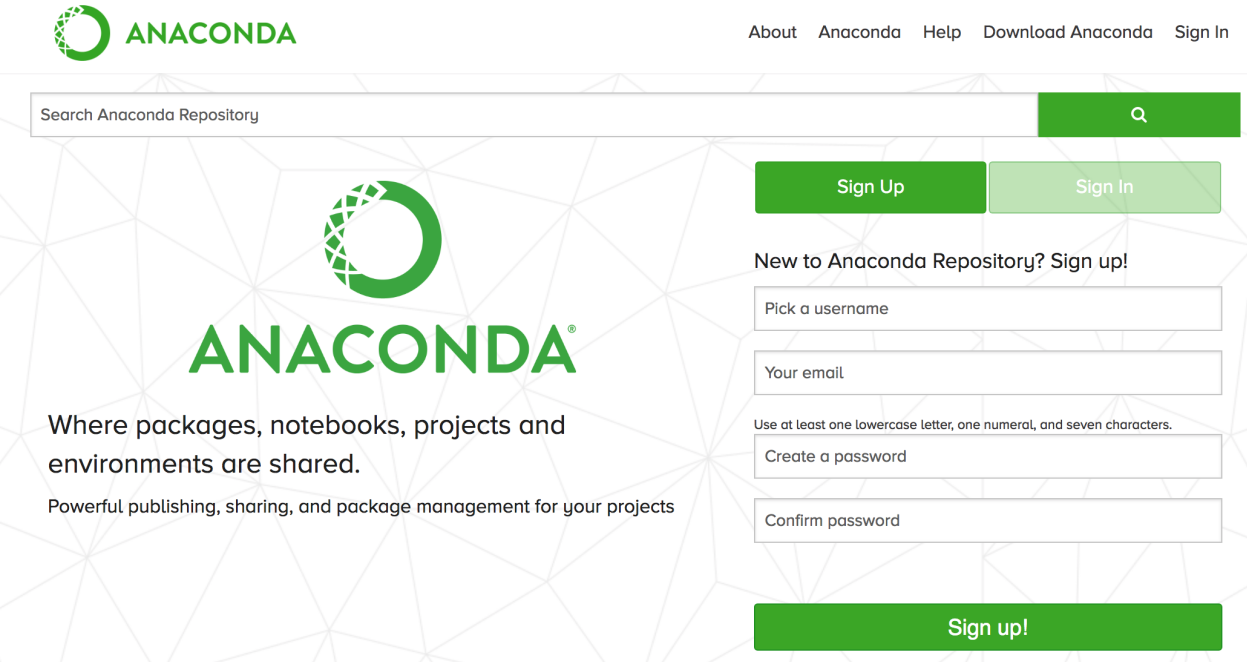
Once you have an installer created, you can return to this page and create a management pack or a parcel from a specific version. Use the **Create from a previous version** option to choose which version you want to use. The **Create Installer** button will be disabled since you have already created an installer. The other buttons will be disabled if you have already created management packs or parcels for those versions.

The versions listed on the drop-down list are the versions that successfully created an installer. An installer is needed to create a management pack or a parcel, so versions which failed won't be listed.



Resetting your password

Open the Anaconda Repository login page:



The **Sign In** tab provides two links to help regain access to your account:

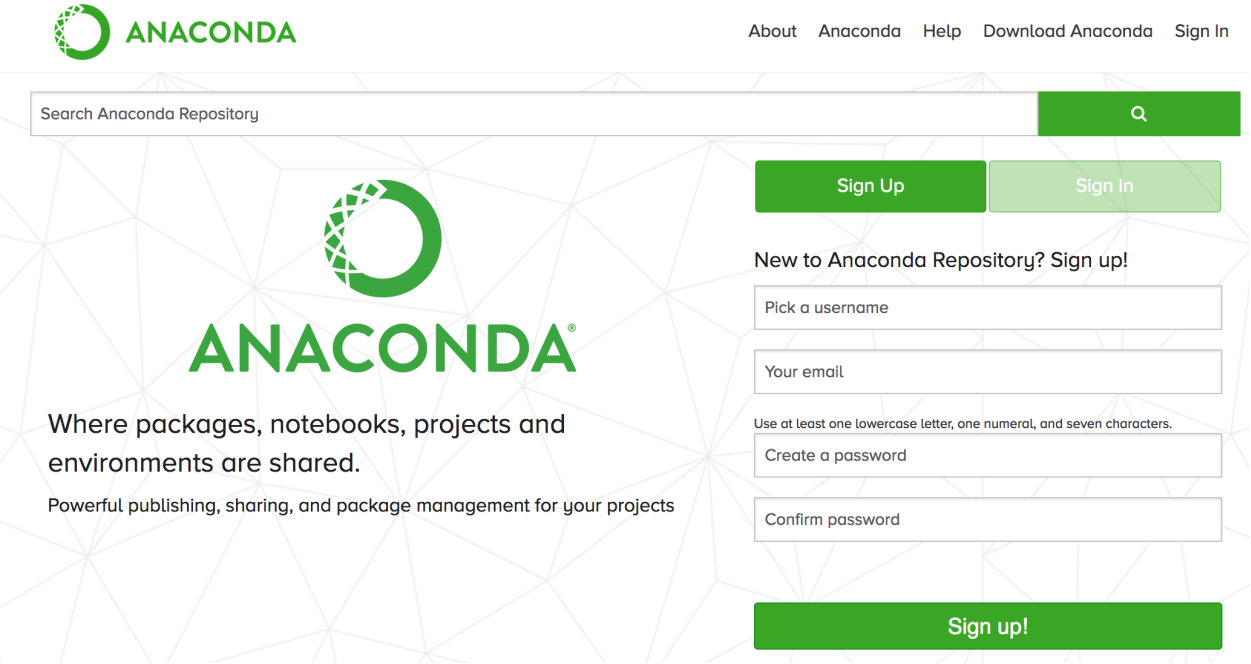
- `I forgot my username.` Click this link to have the username emailed to the email address of record.
- `I forgot my password.` Click this link to have a reset password link sent to the email address of record.

NOTE: The reset password link expires within 24 hours. If you no longer have access to the email account, you can create a new account or email your administrator for assistance.

Also see *Tutorials*.

Anaconda Enterprise 4 Repository is package management server software that makes it easy to find, access, store and share public and private notebooks, projects, installers, environments, and conda and PyPI packages. Repository also makes it easy to stay current with updates made to the packages and environments you are using.

Anaconda also makes an instance of Anaconda Enterprise 4 Repository for private enterprises at Anaconda.org.



To begin using Repository, read *Getting started*, then the remaining sections of the user guide.

Administration guide

This Anaconda Enterprise 4 Repository Administration guide is intended for installers and administrators of Anaconda Enterprise 4 Repository version 2.33.

Installation

This guide provides instructions for installing and configuring Anaconda Enterprise 4 Repository.

System requirements

Your server must meet the requirements for hardware, software, security and network. Please review and verify that you have met all system requirements before beginning your installation.

Hardware requirements

- Physical server or virtual machine.
- CPU: 2 x 64-bit, 2.8 GHz, 8.00 GT/s CPUs or better. *Verify machine architecture*.
- Memory: minimum RAM size of 32 GB, or 16 GB RAM with 1600 MHz DDR3 installed, for a typical installation with 50 regular users. *Verify memory requirements*.
- Storage: Recommended minimum of 650 GB for a mirror of repo.anaconda.com or at least 1.5 TB for an air gapped environment. Additional space is recommended if Repository is used to store packages built by your organization. *Verify storage requirements*.
- Internet access to download the files from Anaconda.org, or a USB drive containing all of the files you need with alternate instructions for air gapped installations.

Software requirements

- Linux environment: Installations have been tested on Red Hat Enterprise Linux/CentOS 6.7, 7.3, 7.4, and 7.5, and Ubuntu 12.04+. *Verify Linux version*.
- Client environment may be Windows, macOS or Linux.
- Ubuntu users may need to install cURL. *Verify cURL access*.
- MongoDB version 2.6+ installed as root and running. Versions through 3.6 are supported. *Verify MongoDB installation*.
- bzip2. *Verify bzip2 installation*.

Security requirements

- Root access or sudo capabilities. *Verify root access and sudo privileges*.
- OPTIONAL: Ability to make IPTables modifications.
- SELinux policy edit privileges.

  NOTE: SELinux does not have to be disabled for Repository operation.

Network requirements

TCP ports are used as follows:

- Inbound TCP 8080, 8443: Anaconda Enterprise 4 Repository.
- Inbound TCP 22: SSH.
- Outbound TCP 443: Anaconda.org.
- Outbound TCP 25: SMTP.
- Outbound TCP 389/636: LDAP(s).

You need your Anaconda.org—Repository in the cloud—account username and password and the installation token provided to you by Anaconda at the time of purchase. If you did not receive your token, please contact your sales representative or our Professional Support Team.

Hardware verification

Machine architecture

Repository is built to operate only on 64-bit computers.

To verify that you have a 64-bit or x86_64 computer, in a terminal window, run:

```
arch
```

This command displays what your system is: 32-bit "i686" or 64-bit "x86_64."

Memory requirements

You need a minimum RAM size of 32 GB, or 16 GB RAM with 1600 MHz DDR3.

In a terminal window, run:

```
free -m
```

This command returns the free memory size in MB.

Storage requirements

To check your available disk space—hard drive or virtual environment size—use the built-in Linux df utility with the `-h` parameter for human readable format:

```
df -h
```

Software verification

Other versions of the Linux environment

Please contact us by filing a GitHub issue if you have problems with a version other than Redhat, CentOS or Ubuntu. Prompts may vary slightly depending on your version.

cURL access for Ubuntu users

RedHat and CentOS Linux distributions have cURL pre-installed, but Ubuntu does not.

To verify cURL access, in a terminal window, run:

```
curl --version
```

If cURL is not found, Ubuntu users can use the Advanced Packaging Tool (APT) to get and install cURL:

```
sudo apt-get install curl
```

TIP: If you already have Miniconda or Anaconda installed, in all versions of Linux you can use the conda command:

```
conda install curl
```

MongoDB version 2.4+ installed

MongoDB version 2.4 or higher must installed as root and running. Versions through 3.4 are supported. To check for the existence of MongoDB and its version number, in a terminal window, run:

```
mongod --version
```

If you get a "not found" message or if the MongoDB version is 2.3 or earlier, then install MongoDB 2.4 or higher using the official installation instructions. Remember to install as root with the sudo command.

MongoDB must always be running before Repository can be started.

To start MongoDB:

```
sudo service mongod start
```

To verify that MongoDB is running:

```
mongo --eval 'db.serverStatus().ok'
```

bzip2 is installed

To check for the existence of bzip2 and its version number, in a terminal window, run:

```
bzip2 --version
```

Security verification

Root access and sudo privileges

The Repository installation process cannot be completed without root access.

To verify that you have sudo privileges, in a terminal window, run:

```
sudo -v
```

Enter your root password when prompted and press Enter (Windows)/Return (Mac).

If you receive a message like the following, contact your system administrator for root access:

```
Sorry, user [username] may not run sudo on [hostname].
```

Installing on an online system

These instructions are for normal Linux installations on machines that have access to the internet. Contact Support for help with mirroring.

NOTE: If the destination server is an air gapped system or otherwise does not have access to the internet, see *Installing on an air gapped system*.

Before you start

Your server must meet the requirements for hardware, software, security and network. Please review and verify that you have met all *system requirements* before beginning your installation.

Your support representative provides you with a download URL for the Anaconda Enterprise 4 Repository installer. Make sure you have the download URL.

1. Install MongoDB 2.6

In a terminal window, create the `yum` repo file as the root user:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
```

NOTE: Ubuntu users use `apt-get` instead of `yum`.

MongoDB for Redhat and CentOS 7

1. Install MongoDB:

```
sudo yum install -y mongodb-org*
```

2. Start MongoDB:

```
sudo systemctl start mongod
```

3. Verify that MongoDB is running:

```
$ sudo systemctl status mongod
mongodb (pid 17258) is running...
```

MongoDB for Redhat and CentOS 6.7+

1. Install MongoDB:

```
sudo yum install -y mongodb-org*
```

2. Start MongoDB:

```
sudo /etc/init.d/mongod start
```

3. Verify that MongoDB is running:

```
$ sudo /etc/init.d/mongod status
mongodb (pid 17258) is running...
```

MongoDB for Ubuntu 12.04+

1. Install MongoDB:

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv 7F0CEB10

echo 'deb http://downloads-distro.mongodb.org/repo/ubuntu-upstart dist 10gen' |␣
↪sudo tee /etc/apt/sources.list.d/mongodb.list

sudo apt-get update

sudo apt-get install -y mongodb-org=2.6.9 mongodb-org-server=2.6.9 mongodb-org-
↪shell=2.6.9 mongodb-org-mongos=2.6.9 mongodb-org-tools=2.6.9
```

NOTE: If you do not specify a version, such as 2.6.9, `apt-get` installs the latest stable version, which is 3.x.

2. Start MongoDB:

```
sudo /etc/init.d/mongod start
```

Verify that MongoDB is running:

```
$ sudo /etc/init.d/mongod status
mongodb (pid 17258) is running...
```

You receive verification that MongoDB is running:

```
start: Job is already running: mongodb
```

Additional MongoDB resources

For additional MongoDB installation information see https://docs.mongodb.org/manual/.

2. Create the Repository administrator account

1. In a Terminal window, create a new user account for Anaconda Repository named "anaconda-server," and switch to this new account:

   ```
   sudo useradd -m anaconda-server
   ```

   NOTE: The anaconda-server user is the default for installing Repository. Any username can be used, but using the root user is discouraged.

2. Create a Repository package storage directory:

   ```
   sudo mkdir -m 0770 -p /opt/anaconda-server/package-storage
   ```

3. Assign ownership of this directory to the anaconda-server user:

   ```
   sudo chown -R anaconda-server:anaconda-server /opt/anaconda-server
   ```

4. Switch to the Repository administrator account:

   ```
   sudo su - anaconda-server
   ```

3. Install Repository

Download the installer

Download the Repository installer from the download URL provided by your support representative:

```
curl "$INSTALLER_URL" > anaconda_repository.sh
```

Install Repository, following the prompts in the installation routine:

```
bash anaconda_repository.sh
```

1. Review and accept the license terms:

   ```
   Welcome to Anaconda Enterprise 4 Repository 2.33 (by Anaconda, Inc.)
   In order to continue the installation process, please review the license agreement.
   Please, press ENTER to continue.
   ```

2. Once you have reviewed the license terms, approve them by typing `yes`:

```
Do you approve the license terms? [yes|no] yes
```

3. Accept the default location or specify an alternative:

```
anaconda_repository will now be installed into this location:
/home/anaconda-server/repo  -Press ENTER to confirm the location
-Press CTRL-C to abort the installation
-Or specify a different location below
 [/home/anaconda-server/repo] >>> /home/anaconda-server/repo" [Press ENTER]
  PREFIX=/home/anaconda-server/repo
  installing: python-2.7.11-0
  ...
  Python 2.7.11 :: Anaconda, Inc.
  creating default environment... installation finished.
```

4. At the end of the installation routine, update the anaconda-server user's path—prepending `/home/anaconda-server/repo`—by answering "yes" at the prompt to add the install location to your path:

```
Do you wish the installer to prepend the anaconda_repository install location to␣
↪PATH in your /home/anaconda-server/.bashrc ? [yes|no]
```

5. Type `yes` and press ENTER.

6. For the new path changes to take effect, source your `.bashrc`:

```
source ~/.bashrc
```

4. Configure Repository

1. Initialize the web server and indicate the filepath for the package storage location:

```
anaconda-server-config --init
anaconda-server-config --set fs_storage_root /opt/anaconda-server/package-storage
```

NOTE: The location for file storage can be any location owned by the anaconda-server user that you created in section 2 above.

NOTE: As of Repository 2.33.8, the `fs_storage_root` configuration setting is mandatory for local filesystem storage and the Repository server will not run without it.

2. Configure the connection to your MongoDB database:

```
anaconda-server-config --set MONGO_URL mongodb://localhost
```

NOTE: You may also *configure an external MongoDB database*.

3. If you are not using LDAP or Kerberos authentication, create an initial superuser account for Repository. Set the environment variable `USER_PASSWORD` with the desired password for the initial user. Then run:

```
anaconda-server-create-user --username "superuser" --email "your@email.com" --
↪superuser
```

NOTE: Replace `superuser` with a username of your choice and `your@email.com` with an email address where you wish to receive system email notifications.

NOTE: To ensure the bash shell does not process any of the characters in this password, limit the password to letters and numbers, with no punctuation. After setup, you can change the password in the web UI.

4. Initialize the Repository database:

```
anaconda-server-db-setup --execute
```

NOTE: The above command is also run when upgrading Repository. Upgrade and then run:

```
anaconda-server-db-setup --execute
```

5. Restart the server.

NOTE: More configuration options can be controlled with one or more `.yaml` configuration files. Repository reads configuration files in this order:

1. From `/etc/anaconda-server/*.yaml`.
2. From `$PREFIX/etc/anaconda-server/*.yaml`.
3. From the path specified in the environment variable ANACONDA_SERVER_CONFIG, if it is set and the command line argument `--config-file` was not used.
4. From the path specified in the command line argument `--config-file`, if it was used.

All configuration is merged, and options from files read earlier are overwritten by files read later. If there are multiple files in the same directory, they are read in alphabetical order.

5. Set up automatic restart on reboot, fail or error

1. Run the `anaconda-server-install-supervisord-config.sh` script to configure supervisord management of the Anaconda server and worker processes:

```
anaconda-server-install-supervisord-config.sh
```

This will generate the `/home/anaconda-server/repo/etc/supervisord.conf` file and add a crontab rule to restart supervisor after each reboot.

It will also create the folder `/home/anaconda-server/repo/etc/supervisord/conf.d/` where you can add `.conf` files with custom configuration.

NOTE: If you don't want to include the crontab rule, use the `--no-crontab` option when running the script.

If an error message says that the user is disallowed from using cron and could not add the crontab rule, you can add it manually with sudo. Edit the crontab file:

```
sudo crontab -e -u anaconda-server
```

When the file is open for editing, add this entry:

```
@reboot /home/anaconda-server/repo/bin/supervisord
```

2. Verify that the server is running:

```
supervisorctl status
```

If installed correctly, you see:

```
anaconda-server RUNNING   pid 10831, uptime 0:00:05
```

3. View the log file at:

```
$PREFIX/var/log/anaconda-server/application.log
```

6. Start and log in to Repository

1. Open your browser and log in to Repository by visiting `http://your.anaconda.repository:8080/` using the superuser account you created in section 4 above.

   NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

2. If you are using LDAP or Kerberos authentication, modify your user account to be a superuser.

   EXAMPLE: If your user account is "jsmith":

```
anaconda-server-admin set-superuser "jsmith"
```

NOTE: See *Troubleshooting* if you have issues starting the repo server.

7. Client configuration

Follow the *Configuring Anaconda Client* instructions so you can use one or more clients to communicate with the server.

8. Install the Repository license

1. In your browser, go to `http://your.anaconda.repository:8080`. Follow the onscreen instructions to upload the license file that you received in an email from your sales representative.

   NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

   Contact your sales representative or support representative if you cannot find or have any questions about your license.

2. After uploading the license file, you will see the login page. Log in using the superuser user and password that you created in section 4 above.

TIP: You can view the current license information and upload a new license file by visiting the URL `http://your.anaconda.repository:8080/admin/license`.

NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

Alternatively, you can install the license by copying the license file directly into the `/home/anaconda-server/.continuum` directory.

9. OPTIONAL: Mirror installers for Anaconda and Miniconda

Miniconda and Anaconda installers can be served by Repository via the static directory located at `/home/anaconda-server/repo/opt/anaconda-server/installers`. To serve up the latest installers for each platform, download them to this directory.

Define the URL for miniconda installers:

```
URL="https://repo.anaconda.com/miniconda/"
```

The `Miniconda*latest*.sh` always point to the latest Miniconda installers. Either these can be mirrored or the ones with the latest version number can be mirrored. Define the list of installers to mirror:

```
versions="Miniconda2-4.5.4-Linux-ppc64le.sh
          Miniconda2-4.5.4-Linux-x86.sh
          Miniconda2-4.5.4-Linux-x86_64.sh
          Miniconda2-4.5.4-MacOSX-x86_64.pkg
          Miniconda2-4.5.4-MacOSX-x86_64.sh
          Miniconda2-4.5.4-Windows-x86.exe
          Miniconda2-4.5.4-Windows-x86_64.exe
          Miniconda3-4.5.4-Linux-ppc64le.sh
          Miniconda3-4.5.4-Linux-x86.sh
          Miniconda3-4.5.4-Linux-x86_64.sh
          Miniconda3-4.5.4-MacOSX-x86_64.pkg
          Miniconda3-4.5.4-MacOSX-x86_64.sh
          Miniconda3-4.5.4-Windows-x86.exe
          Miniconda3-4.5.4-Windows-x86_64.exe"

# miniconda installers
pushd /home/anaconda-server/repo/opt/anaconda-server/installers

for installer in $versions
do
    curl -O $URL$installer
done
```

Define the URL for Anaconda installers:

```
URL="https://repo.anaconda.com/archive/"
```

Define the anaconda version to mirror.

EXAMPLE: To mirror version 5.2.0:

```
versions="Anaconda3-5.2.0-Linux-ppc64le.sh
          Anaconda3-5.2.0-Linux-x86.sh
          Anaconda3-5.2.0-Linux-x86_64.sh
          Anaconda3-5.2.0-MacOSX-x86_64.pkg
          Anaconda3-5.2.0-MacOSX-x86_64.sh
          Anaconda3-5.2.0-Windows-x86.exe
          Anaconda3-5.2.0-Windows-x86_64.exe
          Anaconda2-5.2.0-Linux-ppc64le.sh
          Anaconda2-5.2.0-Linux-x86.sh
          Anaconda2-5.2.0-Linux-x86_64.sh
          Anaconda2-5.2.0-MacOSX-x86_64.pkg
```

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```
          Anaconda2-5.2.0-MacOSX-x86_64.sh
          Anaconda2-5.2.0-Windows-x86.exe
          Anaconda2-5.2.0-Windows-x86_64.exe"

# miniconda installers
pushd /home/anaconda-server/repo/opt/anaconda-server/installers

for installer in $versions
do
    curl -O $URL$installer
done

popd
```

Users can download the installers using curl from the following URL:

```
# Fill in server name, port, and specific installer for your platform
curl -s -O http://your.anaconda.repository:8080/downloads/Miniconda-latest-Linux-x86_64.
↪sh
```

NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

10. Mirror Anaconda.org

The final step is to mirror the packages from a subset of channels on Anaconda.org to the local Repository. The channels to mirror are as follows:

Channel	Description
anaconda	Default anaconda channel containing all packages built and supported by Anaconda, Inc. Also contains custom packages.
r	If you would like conda packages for *r*, mirror this channel. It is typically done under an *r* account.
wakari anaconda-nb-extensions	If the local Repository will be used by Anaconda Enterprise Notebooks, the recommended method is to mirror these channels under the *wakari* account.
msys2	msys2 is required by quite a few windows packages. See http://www.msys2.org/

The packages will be mirrored to the package store defined by the fs_storage_root key as described in section 4 above.

Mirror Anaconda

Mirror the Anaconda channel from Anaconda.org:

```
anaconda-server-sync-conda
```

NOTE: Due to the size of the main repository and depending on the available internet bandwidth, the mirroring process can take hours.

Mirroring an Anaconda repository with Anaconda Enterprise 4 Repository contains documentation and advanced `yaml` configuration for mirroring other channels.

Installing on an air gapped system

These instructions are for installation on air gapped systems or other machines that do not have access to the internet. The air gap archives contain installers, dependencies and packages to mirror. Contact Support for help with mirroring.

Before you start

Your server must meet the requirements for hardware, software, security and network. Please review and verify that you have met all *system requirements* before beginning your installation.

Download the installers archive and the appropriate mirrors archive for your needs. The *Air gap archives* page lists the archives and their contents.

NOTE: These installation instructions assume the air gap media is available on the target server at $INSTALLER_PATH.

EXAMPLE:

```
tar xf <installer-archive> -C /installer/
export INSTALLER_PATH=/installer/anaconda-enterprise-`date +%Y-%m-%d`
```

Also download and expand the archive of conda packages you plan to mirror. These instructions assume packages are expanded to $INSTALLER_PATH:

```
tar xf <archive-of-pkgs-to-mirror> -C /installer/
export MIRRORS_ARCHIVE=/installer/repo-mirrors-`date +%Y-%m-%d`
```

Air gap archives

This section provides information about where to get the air gap archives and their contents.

The air gap archives are generated monthly, generally on the 1st of each month. Monthly archives are provided by Anaconda.

Installers Archive

All the installers and the latest Miniconda and Anaconda installers for all platforms are in the archive titled:

```
anaconda-enterprise-`date +%Y-%m-%d`.tar
```

The archive size is about 14 GB. It contains everything to install Anaconda Enterprise 4 Repository, Anaconda Enterprise Notebooks, Anaconda Adam and Anaconda Scale.

The archive contains:

Contents	Description
aen-*.sh	anaconda-enterprise-notebooks server, gateway, compute installers
anaconda_repository*.sh	anaconda-repository installer
adam-installer*.sh	adam installer
conda/	latest version of Miniconda and Anaconda for all platforms
rpms6x/	dependencies for installing on RHEL-6x/CentOS-6x
rpms7x/	dependencies for installing on RHEL-7x/CentOS-7x

Mirror archives

In addition, the `anaconda-server-sync-conda` subdirectory contains mirror archives. These are platform-specific conda packages that must be mirrored after AE-Repo is installed. If you only need packages for a subset of platforms, download the platform-based installers as they will be much smaller in size.

Each component has an md5 file and a list file which are both small and included for convenience.

Tarball	Contents	Size
repo-mirrors-*date +%Y-%m-%d*.tar	All AE-channels for all platforms	160 GB
x64-repo-mirrors-+*%Y-%m-%d*.tar	x64 conda packages for all AE-channels	100 GB
linux-64-pkgs.tar	conda packages for linux-64 for all AE-channels	45 GB
win-64-pkgs.tar	conda packages for win-64	30 GB
osx-64-pkgs.tar	conda packages for osx-64	30 GB

NOTE: The archives contain packages for channels: Anaconda, R, Adam, Wakari. The anaconda-nb-extensions packages are in the anaconda-nb-extensions channel.

1. Install MongoDB 2.6

Change the directory to the appropriate `rpms*` directory to find dependencies:

```
cd $INSTALLER_PATH/rpms*x/
```

MongoDB for Redhat and CentOS 7

1. Install MongoDB:

   ```
   sudo yum install -y mongodb-org*
   ```

2. Start MongoDB:

   ```
   sudo systemctl start mongod
   ```

3. Verify that MongoDB is running:

   ```
   $ sudo systemctl status mongod
   mongodb (pid 17258) is running...
   ```

MongoDB for Redhat and CentOS 6.7+

1. Install MongoDB:

   ```
   sudo yum install -y mongodb-org*
   ```

2. Start MongoDB:

   ```
   sudo /etc/init.d/mongod start
   ```

3. Verify that MongoDB is running:

```
$ sudo /etc/init.d/mongod status
mongodb (pid 17258) is running...
```

MongoDB for Ubuntu 12.04+

1. Install MongoDB:

```
sudo apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv 7F0CEB10

echo 'deb http://downloads-distro.mongodb.org/repo/ubuntu-upstart dist 10gen' |␣
↪sudo tee /etc/apt/sources.list.d/mongodb.list

sudo apt-get update

sudo apt-get install -y mongodb-org=2.6.9 mongodb-org-server=2.6.9 mongodb-org-
↪shell=2.6.9 mongodb-org-mongos=2.6.9 mongodb-org-tools=2.6.9
```

   NOTE: If you do not specify a version, such as 2.6.9, `apt-get` installs the latest stable version, which is 3.x.

2. Start MongoDB:

```
sudo /etc/init.d/mongod start
```

   Verify that MongoDB is running:

```
$ sudo /etc/init.d/mongod status
mongodb (pid 17258) is running...
```

   You receive verification that MongoDB is running:

```
start: Job is already running: mongodb
```

Additional MongoDB resources

For additional MongoDB installation information see https://docs.mongodb.org/manual/.

2. Create the Repository administrator account

1. In a Terminal window, create a new user account for Anaconda Repository named "anaconda-server," and switch to this new account:

```
sudo useradd -m anaconda-server
```

   NOTE: The anaconda-server user is the default for installing Repository. Any username can be used, but using the root user is discouraged.

2. Create a Repository package storage directory:

```
sudo mkdir -m 0770 -p /opt/anaconda-server/package-storage
```

3. Assign ownership of this directory to the anaconda-server user:

```
sudo chown -R anaconda-server:anaconda-server /opt/anaconda-server
```

4. Switch to the Repository administrator account:

```
sudo su - anaconda-server
```

3. Install Repository

Install Repository, following the prompts in the installation routine:

```
bash $INSTALLER_PATH/anaconda_repository-*-linux-64.sh
```

NOTE: Path should have only one installer that is for the latest stable version of Repository.

1. Review and accept the license terms:

```
Welcome to Anaconda Enterprise 4 Repository 2.33 (by Anaconda, Inc.)
In order to continue the installation process, please review the license agreement.
Please, press ENTER to continue.
```

2. Once you have reviewed the license terms, approve them by typing `yes`:

```
Do you approve the license terms? [yes|no] yes
```

3. Accept the default location or specify an alternative:

```
anaconda_repository will now be installed into this location:
/home/anaconda-server/repo  -Press ENTER to confirm the location
-Press CTRL-C to abort the installation
-Or specify a different location below
 [/home/anaconda-server/repo] >>> /home/anaconda-server/repo" [Press ENTER]
  PREFIX=/home/anaconda-server/repo
  installing: python-2.7.11-0
  ...
  Python 2.7.11 :: Anaconda, Inc.
  creating default environment... installation finished.
```

4. At the end of the installation routine, update the anaconda-server user's path—prepending `/home/anaconda-server/repo`—by answering "yes" at the prompt to add the install location to your path:

```
Do you wish the installer to prepend the anaconda_repository install location to␣
↪PATH in your /home/anaconda-server/.bashrc ? [yes|no]
```

5. Type `yes` and press ENTER.

6. For the new path changes to take effect, source your `.bashrc`:

```
source ~/.bashrc
```

4. Configure Repository

1. Initialize the web server and indicate the filepath for the package storage location:

```
anaconda-server-config --init
anaconda-server-config --set fs_storage_root /opt/anaconda-server/package-storage
```

   NOTE: The location for file storage can be any location owned by the anaconda-server user that you created in section 2 above.

   NOTE: As of Repository 2.33.8, the `fs_storage_root` configuration setting is mandatory for local filesystem storage and the Repository server will not run without it.

2. Configure the connection to your MongoDB database:

```
anaconda-server-config --set MONGO_URL mongodb://localhost
```

   NOTE: You may also *configure an external MongoDB database*.

3. If you are not using LDAP or Kerberos authentication, create an initial superuser account for Repository. Set the environment variable `USER_PASSWORD` with the desired password for the initial user. Then run:

```
anaconda-server-create-user --username "superuser" --email "your@email.com" --
↪superuser
```

   NOTE: Replace `superuser` with a username of your choice and `your@email.com` with an email address where you wish to receive system email notifications.

   NOTE: To ensure the bash shell does not process any of the characters in this password, limit the password to letters and numbers, with no punctuation. After setup, you can change the password in the web UI.

4. Initialize the Repository database:

```
anaconda-server-db-setup --execute
```

   NOTE: The above command is also run when upgrading Repository. Upgrade and then run:

```
anaconda-server-db-setup --execute
```

5. Restart the server.

NOTE: More configuration options can be controlled with one or more `.yaml` configuration files. Repository reads configuration files in this order:

1. From `/etc/anaconda-server/*.yaml`.
2. From `$PREFIX/etc/anaconda-server/*.yaml`.
3. From the path specified in the environment variable ANACONDA_SERVER_CONFIG, if it is set and the command line argument `--config-file` was not used.
4. From the path specified in the command line argument `--config-file`, if it was used.

All configuration is merged, and options from files read earlier are overwritten by files read later. If there are multiple files in the same directory, they are read in alphabetical order.

5. Set up automatic restart on reboot, fail or error

1. Run the `anaconda-server-install-supervisord-config.sh` script to configure supervisord management of the Anaconda server and worker processes:

```
anaconda-server-install-supervisord-config.sh
```

   This will generate the `/home/anaconda-server/repo/etc/supervisord.conf` file and add a crontab rule to restart supervisor after each reboot.

   It will also create the folder `/home/anaconda-server/repo/etc/supervisord/conf.d/` where you can add `.conf` files with custom configuration.

   NOTE: If you don't want to include the crontab rule, use the `--no-crontab` option when running the script.

   If an error message says that the user is disallowed from using cron and could not add the crontab rule, you can add it manually with sudo. Edit the crontab file:

```
sudo crontab -e -u anaconda-server
```

   When the file is open for editing, add this entry:

```
@reboot /home/anaconda-server/repo/bin/supervisord
```

2. Verify that the server is running:

```
supervisorctl status
```

   If installed correctly, you see:

```
anaconda-server RUNNING   pid 10831, uptime 0:00:05
```

3. View the log file at:

```
$PREFIX/var/log/anaconda-server/application.log
```

6. Start and log in to Repository

1. Open your browser and log in to Repository by visiting `http://your.anaconda.repository:8080/` using the superuser account you created in section 4 above.

   NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

2. If you are using LDAP or Kerberos authentication, modify your user account to be a superuser.

   EXAMPLE: If your user account is "jsmith":

```
anaconda-server-admin set-superuser "jsmith"
```

NOTE: See *Troubleshooting* if you have issues starting the repo server.

7. Client configuration

Follow the *Configuring Anaconda Client* instructions so you can use one or more clients to communicate with the server.

8. Install the Repository license

1. In your browser, go to `http://your.anaconda.repository:8080`. Follow the onscreen instructions to upload the license file that you received in an email from your sales representative.

   NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

   Contact your sales representative or support representative if you cannot find or have any questions about your license.

2. After uploading the license file, you will see the login page. Log in using the superuser user and password that you created in section 4 above.

TIP: You can view the current license information and upload a new license file by visiting the URL `http://your.anaconda.repository:8080/admin/license`.

NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

Alternatively, you can install the license by copying the license file directly into the `/home/anaconda-server/.continuum` directory.

9. OPTIONAL: Mirror installers for Anaconda and Miniconda

Miniconda and Anaconda installers can be served by Repository via the static directory located at `/home/anaconda-server/repo/opt/anaconda-server/installers`. To serve up the latest installers for each platform, copy them from your *air gap archive* to this directory.:

```
cp Miniconda-latest-Linux-x86_64.sh /home/anaconda-server/repo/opt/anaconda-server/
↪installers
```

Replace `Miniconda-latest-Linux-x86_64.sh` with your Anaconda or Miniconda installer name.

NOTE: Air gap archive only contains the latest version of both Miniconda and Anaconda installers.

Users can download the installers using curl from the following URL:

```
# Fill in server name, port, and specific installer for your platform
curl -s -O http://your.anaconda.repository:8080/downloads/Miniconda-latest-Linux-x86_64.
↪sh
```

NOTE: Replace `your.anaconda.repository` with the IP address or domain name of your repository.

10. Mirror Anaconda.org

The final step is to mirror the packages from a subset of channels on Anaconda.org to the local Repository. The channels to mirror are as follows:

Channel	Description
anaconda	Default anaconda channel containing all packages built and supported by Anaconda, Inc. Also contains custom packages.
r	If you would like conda packages for *r*, mirror this channel. It is typically done under an *r* account.
wakari anaconda-nb-extensions	If the local Repository will be used by Anaconda Enterprise Notebooks, the recommended method is to mirror these channels under the *wakari* account.
msys2	msys2 is required by quite a few windows packages. See http://www.msys2.org/

The packages will be mirrored to the package store defined by the fs_storage_root key as described in section 4 above.

Mirror Anaconda

Since we are mirroring from a local file system, some additional configuration is necessary. The steps are the same for each channel:

1. Create a mirror configuration `yaml` typically stored in `$PREFIX/etc/anaconda-server/mirror/`.
2. *Customize your mirror*. An example is if you only need to mirror packages for a subset of platforms. By default, it mirrors all packages found in the channels linux-64, osx-64, win-64, win-32 and linux-32.
3. Invoke the mirror command by pointing it to the config file:

```
echo "channels:" > ~/repo/etc/anaconda-server/mirror/conda.yaml
echo " - file://$MIRRORS_ARCHIVE/anaconda-suite/pkgs" >> \
      ~/repo/etc/anaconda-server/mirror/conda.yaml
```

4. Mirror the default Anaconda packages:

```
anaconda-server-sync-conda --mirror-config ~/repo/etc/anaconda-server/mirror/conda.
↪yaml
```

Mirroring an Anaconda repository with Anaconda Enterprise 4 Repository contains documentation and advanced `yaml config` for mirroring other channels.

Configuration

Enabling HTTPS

Before you begin, purchase an SSL certificate and download the SSL `*.cert` file and SSL `*.key` file.

NOTE: If security is not an issue, for testing, you may set up a self-signed SSL certificate. For more information, see http://www.selfsignedcertificate.com/.

1. Save the SSL `*.cert` file and an SSL `*.key` file in your home directory.
2. Configure the server to use those keys and the correct ports:

```
anaconda-server-config --set ssl_options.keyfile ~/localhost.key
anaconda-server-config --set ssl_options.certfile ~/localhost.cert
anaconda-server-config --set port 8443
```

3. Restart your server for the changes to take effect:

```
supervisorctl restart all
```

4. To test, navigate to the site using `https` in the address bar.

   NOTE: If you use a self-signed SSL certificate, your web browser issues a warning that the website certificate cannot be verified.

Next, configure your client side tools `conda` and `anaconda-client` to pull packages from the local repo by setting the `ssl_verify` flags.

Configure conda

If your conda client is configured to point to this local repo, update the configuration file `.condarc` to contain the `ssl_verify` flag. If you're using a self-signed certificate, configure the `ssl_verify` flag in `.condarc` to point to the root CA used to sign the Anaconda Enterprise Repository server certificate.

Configure anaconda-client

If you're using `anaconda-client` to connect to Anaconda Enterprise Repository with the command line, set the `ssl_verify` flag.

Use `anaconda config --files` to find the `anaconda-client` configuration files.

SEE the *command reference* for updating the client sites configuration for `anaconda-client`.

Enabling email and SMTP

To send emails such as password reset emails, Repository must have the *email settings* configured.

Configuring a standard or alternate port

The easiest way to enable clients to access a Repository server on standard ports is to configure the server to redirect traffic received on standard HTTP port 80 to the standard Repository HTTP port 8080:

```
sudo iptables -t nat -F
sudo iptables -t nat -A OUTPUT -d localhost -p tcp --dport 80 -j REDIRECT --to-ports 8080
sudo iptables -t nat -I PREROUTING -p tcp --dport 80 -j REDIRECT --to-port 8080
```

HTTPS

To use HTTPS, redirect traffic from standard HTTPS port 443 to standard Repository HTTPS port 8443:

```
sudo iptables -t nat -A OUTPUT -d localhost -p tcp --dport 443 -j REDIRECT --to-ports␣
↪8443
sudo iptables -t nat -I PREROUTING -p tcp --dport 443 -j REDIRECT --to-port 8443
```

NOTE: See also *Enabling HTTPS*.

Alternate port

To run Repository on a port other than the standard port 8080:

1. Modify the usual instructions by adjusting the port numbers in your *iptables configuration*.
2. Specify the correct port in your `supervisord.conf` file.

Adjusting IPTables to accept requests on port 80

Enable clients to access a Repository on standard ports by configuring the server to redirect traffic received on standard HTTP port 80 to the standard Repository HTTP port 8080.

NOTE: These commands assume the default state of IPTables, which is on and allowing inbound SSH access on port 22. This is the factory default state for CentOS 6.7. If this default has been changed, you can reset it:

```
sudo iptables -L
```

CAUTION: Mistakes with IPTables rules can render a remote machine inaccessible.

1. Allow inbound access to tcp port 80:

   ```
   sudo iptables -I INPUT -i eth0 -p tcp --dport 80 -m comment --comment "# Anaconda␣
   ↪Repo #" -j ACCEPT
   ```

2. Allow inbound access to tcp port 8080:

   ```
   sudo iptables -I INPUT -i eth0 -p tcp --dport 8080 -m comment --comment "# Anaconda␣
   ↪Repo #" -j ACCEPT
   ```

3. Redirect inbound requests to port 80 to port 8080:

   ```
   sudo iptables -A PREROUTING -t nat -i eth0 -p tcp --dport 80 -m comment --comment "
   ↪# Anaconda Repo #" -j REDIRECT --to-port 8080
   ```

4. Display the current IPTables rules:

   ```
   iptables -L -n
   Chain INPUT (policy ACCEPT)
   target     prot opt source               destination
   ACCEPT     tcp  --  0.0.0.0/0            0.0.0.0/0           tcp dpt:8080 /* #␣
   ↪Anaconda Repo # */
   ACCEPT     tcp  --  0.0.0.0/0            0.0.0.0/0           tcp dpt:80 /* #␣
   ↪Anaconda Repo # */
   ```

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```
ACCEPT     all  --  0.0.0.0/0            0.0.0.0/0           state RELATED,
↪ESTABLISHED
ACCEPT     icmp --  0.0.0.0/0            0.0.0.0/0
ACCEPT     all  --  0.0.0.0/0            0.0.0.0/0
ACCEPT     tcp  --  0.0.0.0/0            0.0.0.0/0           state NEW tcp dpt:22
REJECT     all  --  0.0.0.0/0            0.0.0.0/0           reject-with icmp-host-
↪prohibited

Chain FORWARD (policy ACCEPT)
target     prot opt source               destination
REJECT     all  --  0.0.0.0/0            0.0.0.0/0           reject-with icmp-host-
↪prohibited

Chain OUTPUT (policy ACCEPT)
target     prot opt source               destination
```

NOTE: The PREROUTING (nat) IPTables chain is not displayed by default. To display the chain:

```
iptables -L -n -t nat
Chain PREROUTING (policy ACCEPT)
target     prot opt source               destination
REDIRECT   tcp  --  0.0.0.0/0            0.0.0.0/0           tcp dpt:80 /* #␣
↪Anaconda Repo # */ redir ports 8080

Chain POSTROUTING (policy ACCEPT)
target     prot opt source               destination

Chain OUTPUT (policy ACCEPT)
target     prot opt source               destination
```

5. Save the running IPTables configuration to `/etc/sysconfig/iptables`:

```
sudo service iptables save
```

Connecting to an existing MongoDB database

If you already have a MongoDB server running, you can connect to it by setting the MONGO_URL configuration variable:

```
anaconda-server-config --set MONGO_URL 'mongodb://<hostname>'
```

For more information, see the MongoDB Connection String URI Format manual.

See also *Configuring MongoDB authentication*.

Configuring MongoDB authentication

By default, MongoDB does not require a username or password to access or modify the database. Anaconda recommends enabling and configuring mandatory authentication.

1. Open a MongoDB shell:

```
mongo
```

2. Repository requires read/write access to the database `binstar`. Enter the following commands into the MongoDB shell to create an administrative user and a service user:

```
use admin
```

3. Create an administrative user to manage database users:

```
db.createUser({user:'siteUserAdmin', pwd: '<secure password #1>', roles:[
↪'userAdminAnyDatabase']})
```

4. Authorize as that user to verify the password:

```
db.auth('siteUserAdmin', '<secure password #1>')
```

5. Create a service user for Repository:

```
db.createUser({user:'anaconda', pwd: '<secure password #2>', roles:[{db:'binstar',␣
↪role:'readWrite'}]})
```

6. Enable mandatory authentication in MongoDB:
   - If you are using the legacy MongoDB configuration format, add the auth key to `/etc/mongod.conf`:

     ```
     auth=true
     ```

   - If you are using the current MongoDB configuration format, add the security.authorization key to `/etc/mongod.conf`:

     ```
     security:
         authorization: enabled
     ```

7. Restart MongoDB to reload the configuration:

```
sudo service mongod restart
```

8. Edit the Repository configuration file and set the `MONGO_URL` parameter to `mongodb://<username>:<password>@<hostname>`.

   After editing the configuration file, restart Repository for the changes to take effect.

9. Edit the Repository configuration file and set the `MONGO_URL` parameter to `mongodb://<username>:<password>@<hostname>`.

   After editing the configuration file, restart Repository for the changes to take effect.

NOTE: For more information about MongoDB authentication and authorization, see https://docs.mongodb.com/v2.6/core/authentication/ and https://docs.mongodb.com/v2.6/core/authorization/.

Whitelisting or blacklisting packages

Sometimes you do not want to replicate all the packages from Repository into your mirror. The `anaconda-server-sync-conda` tool includes whitelist/blacklist functionality to manipulate your list of mirrored packages in a variety of ways.

A mirror config file can be specified when you run `anaconda-server-sync-conda` with the flag `--mirror-config=FILEPATH` and replace FILEPATH with the path to your config file.

NOTE: Configuration files are `yaml` files.

To customize your distribution, you have the following options:

- remote_url: Repository mirrors packages from this source URL.
- mirror_dir: Repository stores packages in this directory on the machine where the script is executed.
- platforms: Repository mirrors packages for these platforms.
- license_blacklist: Repository omits packages with these licenses.
- blacklist: Repository omits these packages.
- whitelist: Repository always mirrors these packages.

TIP: You do not need to set up every option manually. If you only want to adjust one or two options, that is allowed. Untouched options remain defined by the default setting.

EXAMPLE: The following example only selects packages that are available for linux-32 and linux-64 platforms. Win-32 or win-64 packages are not mirrored at all:

```
mirror_dir: /opt/anaconda-server/package-storage
platforms:
  - linux-32
  - linux-64
license_blacklist: GPL
whitelist:
  - distribute
  - conda
blacklist:
  - flask
  - readline
```

The step-by-step algorithm that is used by cas-mirror to create the ultimate list of packages to mirror follows this order:

1. Get a full list of packages from `default_url`.
2. If the platforms option is present, only those packages available to the platforms listed here are left on the list.
3. If license_blacklist is present, then all the packages subject to any of the licenses mentioned here are removed from the list. See the *list of license families that can be blacklisted*.
4. If blacklist is present, then all member packages explicitly mentioned here are removed from the list.
5. If whitelist is present, then those assigned member packages are added to the list. The whitelist option overrides license_blacklist and blacklist, so that a package listed here is mirrored even when under a GPL license or if it appears in the blacklist option.

After performing all of the above actions sequentially, the script produces the ultimate list of packages that are mirrored.

Securing user-created content

To prevent cross-site scripting attacks (XSS), user content—such as Jupyter Notebooks—can be served from a separate domain.

To enable this:

1. Configure the project to use a separate content domain:

```
anaconda-server-config --set SERVER_NAME your.anaconda.repository
anaconda-server-config --set USER_CONTENT_DOMAIN your.usercontent.server
```

   NOTE: Replace `your.anaconda.repository` and `usercontent.your.anaconda.repository` with the respective server IP address or domain name.

2. If your user content domain is a subdomain of your Repository domain, you must also configure the session cookie to only send to the root domain:

```
anaconda-server-config --set SERVER_NAME your.anaconda.repository
anaconda-server-config --set USER_CONTENT_DOMAIN usercontent.your.anaconda.
↪repository
anaconda-server-config --set SESSION_COOKIE_DOMAIN your.anaconda.repository
```

   NOTE: Replace `your.anaconda.repository` and `usercontent.your.anaconda.repository` with the respective server IP address or domain name.

Configuring Repository to use LDAP

To enable Lightweight Directory Access Protocol (LDAP) support:

1. Open the Repository configuration file `$PREFIX/etc/anaconda-server/config.yaml` and add the following configuration:

```
account_names_filter: false
USER_REGEX: ^[a-z0-9_][a-z0-9_-.]+$
LDAP:
  # Replace with company LDAP server
  URI: 'ldap://<ldap.company.com>'

  # Replace <uid=%(username)s,ou=People,dc=company,dc=com> with your company␣
↪specific LDAP Bind/Base DN
  # Bind directly to this Base DN.
  BIND_DN: '<uid=%(username)s,ou=People,dc=company,dc=com>'

  # Map LDAP keys into application specific keys
  KEY_MAP:
      name: 'cn'
      company: 'o'
      location: 'l'
      email: 'mail'
```

2. When switching authentication to LDAP, the admin account is lost, so you need to add your admin account again:

```
anaconda-server-admin set-superuser "jsmith"
```

3. Run the `flask-ldap-login-check` command to verify LDAP connectivity:

```
flask-ldap-login-check binstar.wsgi:app --username 'jsmith' --password 'abc123DEF'
```

   NOTE: Replace `jsmith` and `abc123DEF` with your LDAP username and password.

4. To apply the changes, restart the Repository server:

```
supervisorctl restart all
```

5. Open a new browser window and navigate to your local Repository installation:

```
http://your.anaconda.repository
```

   NOTE: Replace `your.anaconda.repository` with your Repository server IP address or domain name.

6. Log in using your LDAP credentials.

7. Optional. You may set an LDAP network timeout in seconds with the options OPT_NETWORK_TIMEOUT and OPT_TIMEOUT. The default value is 0, meaning no timeout.

   For example, to set the timeout to 60 seconds, add this block to the LDAP settings in your configuration file:

```
OPTIONS:
   OPT_NETWORK_TIMEOUT: 60
   OPT_TIMEOUT: 60
```

Configuring Repository to use Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the Repository configuration file `$PREFIX/etc/anaconda-server/config.yaml` and add the following configuration:

```
account_names_filter: false
USER_REGEX: ^[a-z0-9_][a-z0-9_-.]+$
LDAP:
    # Replace with company LDAP server
    'URI': 'ldap://<ldap.server.url>'

    # This BIND_DN/BIND_PASSWORD default to '', this is shown here for
    # demonstrative purposes. To enable Authorized Bind, insert the AD
    # BIND_DN and BIND_AUTH password for and authorized AD user.
    #
    #e.g. 'BIND_DN': '<cn=Authorized User,cn=users,dc=company,dc=local>'
    #e.g. 'BIND_AUTH': '<AuthUsrPassword>'

    # The values '' perform an anonymous bind so we may use search/bind method
    BIND_DN: ''
    BIND_AUTH: ''

    # Adding the USER_SEARCH field tells the flask-ldap-login that we
    # are using the search/bind method
```

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```
    USER_SEARCH:
        base: <cn=users,dc=company,dc=local>
        filter: sAMAccountName=%(username)s

    # Map ldap keys into application specific keys
    KEY_MAP:
        name: 'cn'
        company: 'o'
        location: 'l'
        email: 'userPrincipalName'
```

2. To apply the changes, restart the Repository server:

```
supervisorctl restart all
```

3. Run the `flask-ldap-login-check` command to verify Active Directory connectivity:

```
flask-ldap-login-check binstar.wsgi:app --username 'jsmith' --password 'abc123DEF'
```

   NOTE: Replace `jsmith` and `abc123DEF` with your Active Directory username and password.

   You see a response similar to the following:

```
[anaconda.server] Started Site
Got userdata for jsmith
{'company': None, 'email': None, 'location': None, 'name': 'Jane Smith'}
```

4. Open your browser and navigate to your local Repository installation:

```
http://your.anaconda.repository
```

   NOTE: Replace `your.anaconda.repository` with your Repository IP address or domain name.

5. Log in with Active Directory.

Configuring Repository to use LDAP groups

Repository can be configured to allow synchronizing the membership of organization groups with groups in an LDAP directory. Owners of an organization can select a specific LDAP group as the source of group members.

Once this is enabled, users who sign in to Repository who are members of the LDAP group automatically are granted the permissions of the organization group.

To enable LDAP groups, configure the following:

- Authenticated bind to LDAP. Repository needs to perform searches against the directory to determine the available groups and the membership of those groups.
- A query for Repository to identify the groups in your LDAP directory. For more information, see *GROUP_SEARCH*.

If LDAP synchronization is disabled or the LDAP server is unreachable, the member list at the time is used for the group.

To administer and debug LDAP synchronization, a superuser can visit:

```
http://your.anaconda.repository/admin/ldap
```

NOTE: Replace `your.anaconda.repository` with your Repository IP address or domain name.

Enabling TLS on LDAP/Active Directory

To enable a secure Transport Layer Security (TLS) connection on LDAP/Active Directory, add the following to the LDAP configuration section of the file `$PREFIX/etc/anaconda-server/config.yaml`, replacing `/path/to/certfile` with the actual path to the certfile.:

```
LDAP:
  ...  # Rest of the LDAP config
  START_TLS: true,
  OPTIONS:
    OPT_PROTOCOL_VERSION: 3
    OPT_X_TLS_DEMAND: true
    OPT_X_TLS_REQUIRE_CERT: 'OPT_X_TLS_NEVER'
    OPT_X_TLS_CACERTFILE: '/path/to/certfile'
```

NOTE: `START_TLS` is not compatible with `LDAPS`. When using `START_TLS`, the `URI` value in the LDAP configuration section must start with `ldap://`. When using `START_TLS`, the connection starts as a regular connection, and is upgraded to use TLS after connection has been established.

If you're using self-signed certificates, you'll need to add `OPT_X_TLS_NEWCTX` as the **last entry** of the `OPTIONS` field of the `LDAP` options:

```
LDAP:
  ...  # Rest of the LDAP config
  START_TLS: true,
  OPTIONS:
    OPT_PROTOCOL_VERSION: 3
    OPT_X_TLS_DEMAND: true
    OPT_X_TLS_REQUIRE_CERT: 'OPT_X_TLS_NEVER'
    OPT_X_TLS_CACERTFILE: '/path/to/certfile'
    OPT_X_TLS_NEWCTX: 0
```

Using LDAP and TLS configuration options

URI

Start by setting URI to point to your server. The value of this setting can be anything that your LDAP library supports. For instance, `openldap` may allow you to give a comma- or space-separated list of URI values to try in sequence.

BIND_DN

The distinguished name to use when binding to the LDAP server with BIND_AUTH. Use the empty string—the default—for an anonymous bind.

BIND_AUTH

The password to use with BIND_DN.

USER_SEARCH

A dictionary that locates a user in the directory. The dict object must contain the required entries `base` and `filter` and may contain the optional entry `scope`.

- base: The base DN to search.
- filter: Should contain the placeholder `%(username)s` for the username.
- scope: One of `LDAP_SCOPE_BASE`, `LDAP_SCOPE_ONELEVEL` or `LDAP_SCOPE_SUBTREE`.

EXAMPLE:

```
{'base': 'dc=example,dc=com', 'filter': 'uid=%(username)s'}
```

SUPERUSER_SEARCH

A dict that will determine whether a valid user is a superuser. The dict object must contain the required entries `base` and `filter` and may contain the optional entry `scope`. If the search is successful, then something is returned by the LDAP server, and the user is given superuser permissions.

- base: The base DN to search.
- filter: Should contain the placeholder `%(username)s` for the username.
- scope: One of `LDAP_SCOPE_BASE`, `LDAP_SCOPE_ONELEVEL`, or `LDAP_SCOPE_SUBTREE`.

For example:

```
{'base': 'cn=admin,ou=Groups,dc=example,dc=com', 'filter': 'memberUid=%(username)s'}
```

Notice that this check is done during the login procedure, so even though privileges might have been removed from (or added to) the LDAP server, the user will have to authenticate again to see the changes.

ENABLE_GROUPS

This attribute enables LDAP group synchronization, allowing users to synchronize group membership with an LDAP directory. Defaults to `false`.

EXAMPLE:

```
ENABLE_GROUPS: true
```

GROUP_SEARCH

A dictionary that locates a group in the directory. An LDAP search is performed using the `base` distinguished name and `filter`.

NOTE: Unlike `USER_SEARCH`, **you must put parenthesis around the GROUP_SEARCH filter**. It may appear to work without parenthesis, when it's actually failing or behaving unpredictably.

EXAMPLE:

```
GROUP_SEARCH:
    base: dc=example,dc=com
    filter: (objectClass=group)
```

NOTE: Anaconda Enterprise 4 Repository assumes that the groups' `objectClass` is `groupOfNames` (or a compatible schema). The following LDIF snippet shows an example group instance:

```
dn: cn=Analysts,ou=Anaconda Groups,dc=example,dc=com
cn: Analysts
member: cn=John Doe,ou=Users,dc=example,dc=com
member: cn=Jane Doe,ou=Users,dc=example,dc=com
member: cn=John Q. Public,ou=Users,dc=example,dc=com
member: cn=Guy Incognito,ou=Users,dc=example,dc=com
objectclass: groupOfNames
objectclass: top
```

GROUP_MEMBERS_ATTR

The LDAP attribute on a group object that indicates the users that are members of the group. Defaults to `member`.

EXAMPLE:

```
GROUP_MEMBERS_ATTR: 'member'
```

NOTE: Anaconda Enterprise 4 Repository assumes that the groups' *objectClass* is *groupOfNames* (or a compatible schema).

REFRESH_INTERVAL

The number of seconds that group membership information from LDAP is used before being fetched from the directory server again. Defaults to `3600`, which is 1 hour.

EXAMPLE:

```
REFRESH_INTERVAL: 600
```

KEY_MAP

This is a dict mapping application context to LDAP. An application may expect user data to be consistent, and not all LDAP setups use the same configuration:

```
'application_key': 'ldap_key'
```

EXAMPLE:

```
KEY_MAP={'name': 'cn', 'company': 'o', 'email': 'mail'}
```

START_TLS

If `true`, each connection to the LDAP server calls `start_tls_s()` to enable TLS encryption over the standard LDAP port. There are a number of configuration options that can be given to OPTIONS that affect the TLS connection. For example, OPT_X_TLS_REQUIRE_CERT can be set to `OPT_X_TLS_NEVER` to disable certificate verification, perhaps to allow self-signed certificates.

OPTIONS

This stores LDAP specific options.

EXAMPLE:

```
LDAP:
    OPTIONS:
        OPT_PROTOCOL_VERSION: 3
        OPT_X_TLS_REQUIRE_CERT: 'OPT_X_TLS_NEVER'
```

TLS—secure LDAP

To enable a secure TLS connection you must set START_TLS to `true`. There are a number of configuration options for OPTIONS that affect the TLS connection.

EXAMPLE: OPT_X_TLS_REQUIRE_CERT set to `OPT_X_TLS_NEVER` disables certificate verification, perhaps to allow self-signed certificates:

```
LDAP:
    START_TLS: true
    OPTIONS:
        OPT_PROTOCOL_VERSION: 3
```

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```
        OPT_X_TLS_DEMAND: true
        OPT_X_TLS_REQUIRE_CERT: 'OPT_X_TLS_NEVER'
        OPT_X_TLS_CACERTFILE: '/path/to/certfile'
```

Configuring Repository to use Kerberos

Kerberos is an authentication protocol designed to allow nodes communicating over an insecure network to verify identity. Repository can use Kerberos to authenticate users.

The Kerberos protocol uses timestamps to prevent replay attacks on expired credentials, so the Network Time Protocol (NTP) service must be set up and working correctly.

Several aspects of Kerberos rely on name service. Your domain name system (DNS) entries and your hosts must have the correct information. The `hostname` command and the configuration file `/etc/hostname` must reflect the fully-qualified domain name (FQDN) of the machine. The configuration file `/etc/hosts` must include an entry with the FQDN, to allow reverse-DNS lookups to be performed.

To allow clients to authenticate against Anaconda Enterprise 4 Repository, create a principal for the service with a private key that identifies the service. Create a service principal `HTTP/your.anaconda.repository`, and create the keytab containing this principal to `$PREFIX/etc/anaconda-server/http.keytab`:

```
SERVER_NAME=your.anaconda.repository
```

NOTE: Replace `your.anaconda.repository` with your server IP address or domain name.

If you are using MIT Kerberos:

```
kadmin -q "addprinc HTTP/${SERVER_NAME}"
kadmin -q "ktadd -k $PREFIX/etc/anaconda-server/http.keytab HTTP/${SERVER_NAME}"
chown anaconda-server:anaconda-server $PREFIX/etc/anaconda-server/http.keytab
chmod 600 $PREFIX/etc/anaconda-server/http.keytab
```

If you are using Active Directory:

1. Open Active Directory Users and Computers.
2. Select the Users container.
3. In the **Action** menu, select New, then select User.
4. In the New Object - User dialog, type the user information. In this example, we use `your-anaconda-repository` as the login.
5. In the next dialog, select the options Password never expires and User cannot change password.
6. Right-click on the newly created user, and select Properties.
7. In the Properties dialog, select the **Account** tab, and ensure the Do not require Kerberos preauthentication option is selected.
8. Open an Administrative prompt and run:

   ```
   ktpass -princ HTTP/your.anaconda.repository@YOUR.DOMAIN -out http.keytab -pass "*" -
   ↪mapUser your-anaconda-user@your-anaconda-server -ptype KRB5_NT_PRINCIPAL
   ```

9. Copy the newly created file `http.keytab` to `$PREFIX/etc/anaconda-server/http.keytab` on your Repository server.

To enable Kerberos authentication on Repository, add the configuration options to `$PREFIX/etc/anaconda-server/config.yaml`:

```
AUTH_TYPE: KERBEROS
KRB5_KTNAME: /home/anaconda-server/repo/etc/anaconda-server/http.keytab
```

For a minimal configuration example see *Kerberos-Anaconda Enterprise 4 Repository setup example*.

Kerberos configuration options

AUTH_TYPE	string	Configures the authentication scheme used for Repository. Set to `KERBEROS` to enable Kerberos authentication. Default: `NATIVE`.
KRB5_KTNAME	string	The file path of the keytab containing the service principal for Repository. Default: `/etc/krb5.keytab`.
KRB5_SERVICE_NA	string	The service type used to identify the service principal for Repository. `HTTP` in `HTTP/your.anaconda.repository@YOUR.REALM`. Default: `HTTP`.
KRB5_HOSTNAME	string	The hostname used to identify the service principal for Repository. `your.anaconda.repository` in `HTTP/your.anaconda.repository@YOUR.REALM`. Default: the hostname of the machine on which Repository is running.

Kerberos-Anaconda Enterprise 4 Repository setup example

Kerberos authentication adds a layer of security to Anaconda Enterprise 4 Repository. The following example show how to set up a minimal working installation with three machines: One running anaconda server, one running the MIT Kerberos Key Distribution Center (KDC), and a client from where we are going to connect to both services.

For this example we assume that both the KDC and Anaconda Enterprise 4 Repository are already configured and the 3 systems have the Network Time Protocol (NTP) service working.

Initial Setup

All 3 machines are running CentOS 7 but the configurations mentioned here apply for many other Linux distributions. We are going to use the following domain names:

- Anaconda Enterprise 4 Repository: `anaconda.kerberos.local`
- Kerberos KDC: `kdc.kerberos.local`
- Client: `client.kerberos.local`

Make sure that the information is correct in the configuration files `/etc/hostname` and `/etc/hosts` to allow reverse-DNS lookups.

The name of the Kerberos realm is `KERBEROS.LOCAL`. The 3 machines have the same configuration file `/etc/krb5.conf`:

```
[logging]
    kdc = FILE:/var/log/krb5kdc.log
    admin_server = FILE:/var/log/kadmind.log
    default = SYSLOG:NOTICE:DAEMON
```

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```
[libdefaults]
    dns_lookup_realm = true
    dns_lookup_kdc = true
    ticket_lifetime = 24h
    renew_lifetime = 7d
    forwardable = true
    rdns = false
    default_realm = KERBEROS.LOCAL
    default_ccache_name = KEYRING:persistent:%{uid}

[realms]
    KERBEROS.LOCAL = {
        kdc = kdc.kerberos.local
        admin_server = kdc.kerberos.local
 }

[domain_realm]
    .kerberos.local = KERBEROS.LOCAL
    kerberos.local = KERBEROS.LOCAL
```

On `kdc.kerberos.local` the files `/var/kerberos/krb5kdc/kdc.conf` and `/var/kerberos/krb5kdc/kadm5.acl` should be configured accordingly.

Configure Anaconda Repository

At this point Anaconda Enterprise 4 Repository is up and running, it's installed on `/home/anaconda-server/repo`, the administrator account in this example is `superuser`. To allow authentication we first create a service principal and the keytab containing this principal. This is accomplished running the following commands as root from a terminal on `anaconda.kerberos.local`.

```
kadmin -q "addprinc HTTP/anaconda.kerberos.local"
kadmin -q "ktadd -k /home/anaconda-server/repo/etc/anaconda-server/http.keytab HTTP/
↪anaconda.kerberos.local"
chown anaconda-server:anaconda-server \
   /home/anaconda-server/repo/etc/anaconda-server/http.keytab
chmod 600 /home/anaconda-server/repo/etc/anaconda-server/http.keytab
```

Now edit the configuration file `/home/anaconda-server/repo/etc/anaconda-server/config.yaml` and add the following lines:

```
AUTH_TYPE: KERBEROS
KRB5_KTNAME: /home/anaconda-server/repo/etc/anaconda-server/http.keytab
```

Finally, add the principal for the admin account on the kerberos realm:

```
kadmin -q "addprinc superuser@KERBEROS.LOCAL"
```

Reboot the server for the changes to take effect.

Client Configuration

To log in to Anaconda Enterprise 4 Repository with Kerberos Authentication, a browser that supports said authentication protocol is necessary. In this example we are using Firefox. Some extra tweaking is required.

- Open Firefox and type **about:config** in the navigation bar, click the confirmation button if necessary to proceed to the configuration page.
- Type **negotiate** in the Search field to filter out the options, double click **network.negotiate-auth.trusted-uris** and enter `.kerberos.local` in the text box.
- Do the same for **network.negotiate-auth.delegation-uris**.

Finally a ticket for the `superuser` should be stored on the local machine. The following command will request it:

```
kinit superuser@KERBEROS.LOCAL
```

Now it is possible to open anaconda server on firefox, in this case the URL is `anaconda.kerberos.local:8080`, after clicking **Sign In**, the user should be able to log in immediately without having to enter any credentials.

Configure Anaconda Enterprise 4 Repository to use PAM

Open the Anaconda Enterprise 4 Repository configuration file `$PREFIX/etc/anaconda-server/config.yaml` and add the following configuration to enable Pluggable Authentication Module (PAM) support:

```
AUTH_TYPE: PAM
```

When switching authentication to PAM the admin account is lost, so you need to add your admin account again:

```
anaconda-server-admin set-superuser "jsmith"
```

To apply the changes, restart the Anaconda Enterprise 4 Repository server:

```
supervisorctl restart all
```

Open a new browser window and navigate to your local Anaconda Enterprise 4 Repository installation:

```
http://your.anaconda.server
```

NOTE: Replace “your.anaconda.server” with your actual Anaconda Enterprise 4 Repository server IP address or domain name.

You can now log in using your PAM credentials.

NOTE: To use the “shadow” PAM backend, add the user under which Anaconda Enterprise 4 Repository is running (usually “anaconda-server”) to the “shadow” group:

```
sudo usermod -a -G shadow anaconda-server
```

Read only mode

The site can be put into **read only** mode to disable any action that modifies the database.

This may be useful when mirroring from the site.

NOTE: Logging in modifies the database, so in **read only** mode users and admins may not log in.

To enable **read only** mode use the setting:

```
READ_ONLY: true
```

Configuring Anaconda Client

Anaconda Client gives you the ability to upload packages to your on-site Anaconda Enterprise 4 Repository and provides highly granular access control capabilities. The instructions below describe how to configure Client to use your local Repository instead of Anaconda Cloud.

Client configuration

On each machine that accesses your on-site Repository, run this command as the machine's local user:

```
anaconda config --set url http://your.server.name:<port>/api
```

Or, to set the default repo on a system-wide basis, run this command:

```
anaconda config --set url http://your.server.name:<port>/api --site
```

NOTE: Replace `your.server.name` with the name of your local Repository and `<port>` with the name of the port used by Repository.

The system level `config` file is used only if no user-level `config` file is present.

To show the system and user `config` file locations and configuration settings:

```
anaconda config --show
```

Conda configuration

When the above `anaconda config` steps are completed, you can access all packages and channels from the local on-site Repository instead of the public Anaconda.org.

Users can then add individual accounts to their `.condarc` file by running the following command:

```
conda config --add channels USERNAME
```

If you still want to access certain channels from the public Anaconda.org, run:

```
conda config --add channels http://conda.anaconda.org/USERNAME
```

NOTE: Replace `USERNAME` with your username.

Conda channel priority

To set a preferred priority for the channels conda searches for package installs, edit your `~/.condarc file` and change the order. Channels at the top are searched first.

For example:

```
channels:
  - channel
  - https://conda.anaconda.org/t/<token>/<channel2>
  - http://conda.anaconda.org/<channel1>
  - defaults
```

The order of search is:

1. Private on-site Repository channel.
2. Private Anaconda.org channel2.
3. Public Anaconda.org channel1.
4. Default channel on the on-site Repository.

Pip configuration

To install PyPI packages from your Repository, add your channel to your `~/.pip/pip.conf` configuration file.

Edit the file and add an extra-index-url entry to the global config section:

```
[global]
extra-index-url = http://your.server.name:<port>/pypi/USERNAME/simple
```

NOTE: Replace `your.server.name` with the name of your local Repository, `<port>` with the name of the port used by Repository and `USERNAME` with your username.

Kerberos configuration

If you have enabled Kerberos authentication as described in *Configuring Repository to use Kerberos*, your browser and Client should be able to authenticate to Repository using Kerberos.

In macOS/Unix, configure the file `/etc/krb5.conf`:

```
[libdefaults]
default_realm = YOUR.DOMAIN

[realms]
YOUR.DOMAIN = {
  kdc = your.kdc.server
}

[domain_realm]
your.anaconda.repository = YOUR.DOMAIN
```

NOTE: Replace `YOUR.DOMAIN` with your domain, `your.kdc.server` with your Kerberos key distribution center (KDC) and `your.anaconda.repository` with your local Repository server.

If your configuration is correct, you should be able to authenticate using the command line tool `kinit`:

```
kinit jsmith
anaconda login
```

NOTE: Replace `jsmith` with your username.

Browser Setup

Many browsers do not present your Kerberos credentials by default, to prevent leaking credentials to untrusted parties. In order to use Kerberos authentication, you must whitelist Repository as a trusted party to receive credentials.

You must restart your browser after configuring the whitelist in order for changes to be reflected.

Safari

Safari requires no configuration—it automatically presents your credentials without whitelisting.

Chrome

The AuthServerWhitelist policy must be set to `your.anaconda.repository` to allow Chrome to present credentials to Repository with the hostname `your.anaconda.repository`. Depending on your DNS configuration, DisableAuthNegotiateCnameLookup may also be required to prevent Chrome from canonicalizing the hostname before generating a service name.

NOTE: Replace `your.anaconda.repository` with your local Repository server.

To configure on macOS:

```
defaults write com.google.Chrome AuthServerWhitelist "your.anaconda.repository"
```

On Linux:

```
mkdir -p /etc/opt/chrome/policies/managed
mkdir -p /etc/opt/chrome/policies/recommended
chmod -w /etc/opt/chrome/policies/managed
echo '{"AuthServerWhitelist": "your.anaconda.repository"}' > /etc/opt/chrome/policies/
↪managed/anaconda_repo_policy.json
```

On Windows, use Group Policy objects to set the Authentication server whitelist setting to `your.anaconda.repository`.

For more information, see Chrome's SPNEGO authentication and administration documentation.

Firefox

1. Navigate to the configuration page `about:config`.
2. Search for `negotiate`.
3. Set the configuration item `network.negotiate-auth.trusted-uris` to `your.anaconda.repository`

NOTE: Replace `your.anaconda.repository` with your local Repository server.

Internet Explorer

1. In the **Tools** menu, select Internet Options.
2. On the **Advanced** tab, in the Security section, select Enable Integrated Windows Authentication.

Configuring local mirrors

You can add a local copy—mirror—of Anaconda or PyPI repositories to your Anaconda Enterprise 4 Repository installation.

This section explains how to use Repository's convenient syncing tools to create and configure local mirrors:

Mirroring an Anaconda repository with Anaconda Enterprise 4 Repository

Before you start

You need to have already installed and configured your Repository instance. Due to the size of Repository, it is important that you have configured a file storage location with sufficient disk space. If necessary, see the *requirements for the file storage location*.

A full Anaconda mirror requires approximately 650 GB.

You will also need to install `cas-mirror` as it is the recommended mirroring tool.

NOTE: The `anaconda-mirror` tool has been deprecated and will not be updated any further.

Mirroring all packages

You can mirror some or all of the contents of the Anaconda repository using the `cas-sync-api-v4` command:

```
$ cas-sync-api-v4 --help
usage: cas-sync-api-v4 [-h] [-f FILENAME] [--config] [--version]
                       [-l LOG_LEVEL] [-v]

Updates an Anaconda repository instance

optional arguments:
  -h, --help            show this help message and exit
  -f FILENAME, --file FILENAME
                        Configuration file location (Defaults to:
                        /home/abarto/.cas-mirror or /etc/cas-mirror)
  --config, --show-config
```

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```
                      Show running configuration and exit
  --version           Print version and exit
  -l LOG_LEVEL, --log-level LOG_LEVEL
                      Set the log level (CRITICAL, ERROR, WARNING, INFO,
                      DEBUG)Default: INFO.
  -v, --verbose       Shorthand for --log-level DEBUG
```

The `cas-sync-api-v4` command leverages the functionality exposed by the `anaconda-client` package to import the remote packages into an existing site. It mirrors all of the packages from the default repo.anaconda.com channels into the `anaconda` user account. These default channels are:

- anaconda.org/main
- anaconda.org/msys2
- anaconda.org/r

1. Associate the URL of your Anaconda Enterprise 4 Repository with a site using the `anaconda` command:

   ```
   anaconda config --set sites.myrepo.url "http://your-anaconda-repo/"
   ```

   NOTE: Replace `your-anaconda-repo` with the URL to your installation of Repository.

2. Create a configuration file `sync.yaml` that tells `cas-sync-api-v4` which site to use:

   ```
   dest_site: myrepo
   ```

3. Check that the configuration is valid with the `--config` parameter:

   ```
   $ cas-sync-api-v4 -f sync.yaml --config
   path: /home/ec2-user/sync.yaml
   remote_url: https://repo.anaconda.com/
   mirror_dir: /opt/cas-mirror
   platforms: ['osx-32', 'osx-64', 'win-32', 'win-64', 'linux-32', 'linux-64', 'linux-
   ↪armv6l', 'linux-armv7l', 'linux-ppc64le']
   fetch_installers: True
   repodata_source: False
   dir_names: ['archive']
   server_log_dir: None
   server_port: None
   dest_site: myrepo
   dest_channel: anaconda
   verify_checksum: False
   delta: False
   delta_dir: None
   log_dir: None
   log_level: 20
   python_versions: []
   pkg_list: []
   license_blacklist: []
   blacklist: []
   whitelist: []
   channels:
       - https://repo.anaconda.com/pkgs/main/
   ```

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```
    - https://repo.anaconda.com/pkgs/free/
    - https://repo.anaconda.com/pkgs/pro/
```

With this configuration, `cas-sync-api-v4` mirrors the contents of all the default channels into the `anaconda` account of the `myrepo` site.

4. Run `cas-sync-api-v4`:

```
cas-sync-api-v4 -f sync.yaml
```

5. Verify the mirroring by opening a browser and loading this URL:

```
http://your-anaconda-repo/anaconda/
```

NOTE: Replace `your-anaconda-repo` with the URL to your installation of Repository.

Mirroring some packages

Alternately, you may not want to mirror all packages. To mirror a subset of the total repository, specify which platforms you want to include, or use the whitelist, blacklist or license_blacklist functionality to control which packages are mirrored, by copying the default configuration file `$PREFIX/etc/anaconda-server/mirror/anaconda.yaml` to `$PREFIX/etc/anaconda-server/mirror/anaconda-custom.yaml`.

For Repository 2.27 or newer, there are sample `yaml` config files located at: `$PREFIX/etc/anaconda-server/mirror`. `PREFIX` is the install location of Repository, which by default is `~anaconda-server/repo/etc/anaconda-server/mirror`.

This command mirrors the repository according to the settings in the configuration file `anaconda-custom.yaml`:

```
cas-sync-api-v4 -f anaconda-custom.yaml
```

For more information, see *Customizing mirrors*.

Offline mirroring

Offline mirroring is done by using both `cas-sync` and `cas-sync-api-v4`. First download all the packages onto a host with Internet access.

EXAMPLE:

To download the packages, create a configuration file named `export.yaml`:

```
mirror_dir: /opt/mirror/export/
platforms:
  - linux-64
  - win-64
python_versions:
  - 2.7
  - 3.6
fetch_installers: false
pkg_list:
  - ca-certificates
  - certifi
```

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```
  - libedit
  - libffi
  - libgcc-ng
  - libstdcxx-ng
  - ncurses
  - openssl
  - pip
  - python
  - readline
  - setuptools
  - sqlite
  - tk
  - wheel
  - xz
  - zlib
```

This example downloads only a subset of the default channels.

Run `cas-sync`:

```
cas-sync -f export.yaml
```

After it finishes, a conda repository for each platform is created in the directory `/opt/mirror/export/pkgs`. We can now take the contents of the directory `/opt/mirror/export/` to the air-gapped environment.

To import the packages, create a config file named `import.yaml`:

```
dest_site: mysite
dest_channel: anaconda
channels:
  - file:///opt/mirror/export/pkgs/
platforms:
  - linux-64
  - win-64
python_versions:
  - 2.7
  - 3.6
```

Make sure these requirements are true:

- The files mirrored onto the connected box have been put in the `/opt/mirror/export` directory.
- An anaconda site named `mysite` is properly configured and the user has logged into it using the `anaconda` command.
- An "anaconda" account exists in the "mysite" site and the logged in user has access to it.

After these requirements are true, run `cas-sync-api-v4`:

```
cas-sync-api-v4 -f import.yaml
```

Mirroring with the deprecated anaconda-mirror command

The `anaconda-mirror` command is deprecated but still in use at some installations.

It is used with the command `anaconda-mirror sync`, or with a configuration file such as `anaconda-custom.yaml` with the command `anaconda-mirror --config-file anaconda-custom sync`.

Resetting packages

Use the `--reset` option to reset the previously mirrored packages:

```
anaconda-mirror --config-file anaconda-custom sync --reset
```

This resets the "last sync" time for the repository, so `anaconda-mirror` requests all packages, not just those changed or added since the last sync. As the requests are processed, `anaconda-mirror` still automatically downloads only those files that differ from the files currently in the repository.

Exporting a mirror

To generate a mirror archive:

```
anaconda-mirror export mirror.tar
```

This command dumps the packages, according to the *configured settings*, into the file `mirror.tar`.

This mirror can be used in an air gapped environment.

Importing a mirror

To mirror the Anaconda repository in an air gapped environment, point `anaconda-mirror` to the exported mirror archive.

Mount the USB drive and then run:

```
anaconda-mirror import $USB/mirror.tar
```

This command mirrors the contents of the local Anaconda repository to your Anaconda Enterprise 4 Repository installation under the username "anaconda."

Filtering

If you want to update the filters on your mirror—for example, to exclude additional licenses—running `anaconda-mirror sync` again retrieves new packages that match this filter, but it does not remove existing packages that no longer match the filter.

To see which packages no longer match your filter:

```
anaconda-mirror clean --dry-run
```

To remove these packages from your mirror:

```
anaconda-mirror clean
```

Mirroring additional channels

If mirroring from an air gap archive, the channel in the following configuration points to a local directory to which the archive is expanded.

In addition, if a platform-specific archive is downloaded, then the config file needs the platforms section. The examples in the following sections assume `x64-repo-mirrors-\*.tar <airgap-archive-mirrors>` is expanded to `$MIRRORS_ARCHIVE`.

Similarly, for an online system, the channel points to Anaconda.org. The platforms are optional and limit the mirrored conda packages to the specified platforms.

Mirroring R channel

1. Create the `yaml` config file.

   EXAMPLE: The following is a config to mirror from an air gap archive containing only x64 packages:

```
cat $PREFIX/etc/anaconda-server/mirror/r.yaml

channels:
  - file://$MIRRORS_ARCHIVE/r/pkgs

# The platforms should correspond to the platforms contained in
# the archive. Omit if the archive contains conda packages for all platforms.
platforms:
  - linux-64
  - osx-64
  - win-64
```

   EXAMPLE: The following is for an online system:

```
cat $PREFIX/etc/anaconda-server/mirror/r.yaml

channels:
  - https://conda.anaconda.org/r
```

2. Mirror the packages to r-channel:

```
anaconda-server-sync-conda --mirror-config \
    $PREFIX/etc/anaconda-server/mirror/r.yaml --account=r-channel
```

Mirroring Wakari channel for AEN

1. Create the `yaml` config file.

   EXAMPLE: The following is a config to mirror from an air gap archive containing only x64 packages:

```
cat $PREFIX/etc/anaconda-server/mirror/wakari.yaml

channels:
  - file://$MIRRORS_ARCHIVE/wakari/pkgs
```

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```
# The platforms should correspond with the platforms contained in
# the archive. Omit if the archive contains conda packages for all platforms.
platforms:
  - linux-64
  - osx-64
  - win-64
```

EXAMPLE: The following is for an online system:

```
cat $PREFIX/etc/anaconda-server/mirror/wakari.yaml

channels:
  - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
  - https://conda.anaconda.org/wakari
```

NOTE: Replace <TOKEN> with the token for the anaconda-nb-extensions channel that you should have received along with your Repository license.

2. Mirror the packages to the Wakari channel:

```
anaconda-server-sync-conda --mirror-config \
    $PREFIX/etc/anaconda-server/mirror/wakari.yaml --account=wakari
```

Mirroring anaconda-adam channel for cluster management

1. Create the `yaml` config file.

   EXAMPLE: The following is a config to mirror from an air gap archive containing only x64 packages:

```
cat $PREFIX/etc/anaconda-server/mirror/anaconda-adam.yaml

channels:
  - file://$MIRRORS_ARCHIVE/anaconda-adam/pkgs

# The platforms should correspond with the platforms contained in
# the archive. Omit if the archive contains conda packages for all
# platforms.
platforms:
      * linux-64
      * osx-64
      * win-64
```

   EXAMPLE: The following is for an online system:

```
cat $PREFIX/etc/anaconda-server/mirror/anaconda-adam.yaml

channels:
  - https://conda.anaconda.org/anaconda-adam
```

2. Mirror the packages to anaconda-adam channel:

```
anaconda-server-sync-conda --mirror-config \
    $PREFIX/etc/anaconda-server/mirror/anaconda-adam.yaml --account=anaconda-adam
```

Configuring conda

Having created the mirror, you still need to configure conda to search for packages here rather than on the default Anaconda repository. You can do that by editing your `~/.condarc` file to add the appropriate channel:

```
channels:
    - http://<anaconda.repo.ipaddress>:<port>/conda/anaconda/
```

NOTE: Replace `<anaconda.repo.ipaddress>` with the URL to your installation of Repository.

NOTE: This configuration change can be made at the user level or via an administrative conda file, to force all internal users to use your local Anaconda mirror rather than querying the Anaconda repository.

NOTE: Users can download Anaconda installers that are pre-configured to search your Repository from `http://<anaconda.repository.addr>/downloads`. To learn how to generate these installers, see *Customizing installers*.

Mirroring a PyPI repository

Before you start

You need to have already installed and configured your Repository instance. Due to the size of Repository, it is important that you have configured a file storage location with sufficient disk space. If necessary, see the *requirements for the file storage location*.

The full PyPI mirror requires approximately 120 GB.

Running the PyPI mirror command

To create a PyPI mirror:

```
anaconda-server-sync-pypi
```

This command loads all of the packages on pypi.python.org into the ~pypi binstar user account.

Verify that the command ran successfully by opening your browser to `http://your-anaconda-repo/pypi/~pypi`.

NOTE: Replace `your-anaconda-repo` with the URL to your installation of Repository.

Customizing the mirror

It is possible to customize the mirror behavior by creating a configuration file such as `$PREFIX/etc/anaconda-server/mirror/pypi.yaml` and using the `--mirror-config` option:

```
anaconda-server-sync-pypi --mirror-config /etc/binstar/mirrors/pypi.yaml
```

The following configuration options are available:

Name	Description
user	The local user under which the PyPI packages are imported. Default: pypi.
pkg_list	A list of packages to mirror. Only packages listed are mirrored. If this is set, blacklist and whitelist settings are ignored. **Default:** [].
whitelis	A list of packages to mirror. Only packages listed are mirrored. If the list is empty, all packages are checked. Default: [].
blacklis	A list of packages to skip. The packages listed are ignored. Default: [].
latest_c	Only download the latest versions of the packages. Default: false.
remote_u	The URL of the PyPI mirror. /pypi is appended to build the XML RPC API URL, /simple for the simple index and /pypi/{package}/{version}/json for the JSON API. Default: https://pypi.python.org/.
xml_rpc_	A custom value for XML RPC URL. If this value is present, it takes precedence over the URL built using remote_url. Default: null.
simple_:	A custom value for the simple index URL. If this value is present, it takes precedence over the URL built using remote_url. Default: null.
use_xml_	Whether to use the XML RPC API as specified by PEP381. If this is set to true, the XML RPC API is used to determine which packages to check. Otherwise the scripts falls back to the simple index. If the XML RPC fails, the simple index is used. Default: true.
use_ser:	Whether to use the serial number provided by the XML RPC API. Only packages updated since the last serial saved are checked. If this is set to false, all PyPI packages are checked for updates. Default: true.
create_c	Create the mirror user as an organization instead of a regular user account. All superusers are added to the "Owners" group of the organization. Default: false.
private	Save the mirrored packages as private. **Default:** false.

EXAMPLE:

```
whitelist:
  - requests
  - six
  - numpy
  - simplejson
latest_only: true
remote_url: http://pypimirror.local/
use_xml_rpc: true
```

Configuring pip

To configure pip to use this new mirror, edit /etc/pip.conf as follows:

```
[global]
index-url=https://pypi.anaconda.org/pypi/simple
```

Customizing mirrors

This section explains how you can customize your PyPI or Anaconda repository mirror.

Before you start

Your Anaconda Enterprise 4 Repository should already be installed and configured, as well as the mirroring tool `cas-mirror`. See *mirroring an Anaconda repository*.

Customizing your mirror

The following commands can be used with the `cas-mirror` tool:

- `cas-sync`: Creates or updates an existing local Anaconda package repository. The packages are saved into a local directory. This directory is defined by the `mirror_dir` configuration setting.
- `cas-sync-api-v4`: Creates or updates an existing remote Anaconda package repository. The packages are uploaded into an account of an existing Anaconda Enterprise 4 Repository instance. The account and instance are controlled by the `dest_channel` and `dest_site` configuration settings.
- `cas-merge`: Combines delta repositories into an existing Anaconda package repository. A delta repository contains the changes between the local and remote Anaconda package repositories. Delta repositories are generated by `cas-sync` using the `delta` configuration setting.

All the commands can read a YAML configuration file specified by the `--file` (or `-f`) command line option. The YAML file can contain any of the following valid keys:

remote_url

Conda packages, Anaconda installers and Miniconda installers are fetched from this remote URL.

DEFAULT: `https://repo.anaconda.com/`

channels

Conda packages are fetched from these remote channels.

DEFAULT: A list of these channels:

- `<remote_url>/pkgs/main/`
- `<remote_url>/pkgs/free/`
- `<remote_url>/pkgs/pro/`

mirror_dir

The mirror is saved in this local directory.

NOTE: A full mirror of the Anaconda Enterprise 4 Repository uses about 650 GB of disk space. Make sure the mirror directory has enough space.

DEFAULT: `/opt/cas-mirror`

platforms

Conda packages and installers for this list of platforms are mirrored.

DEFAULT: A list of all platforms. This is:

```
['osx-32', 'osx-64', 'win-32', 'win-64', 'linux-32', 'linux-64', 'linux-armv6l',
'linux-armv7l', 'linux-ppc64le']
```

fetch_installers

Whether to fetch all Anaconda and Miniconda installers from `remote_url`.

If `fetch_installers` is set to `false` then installers are not fetched.

DEFAULT: `true`

python_versions

Python versions to mirror.

DEFAULT: All versions.

EXAMPLE: `['2.7', '3.6']`

pkg_list

An explicit list of package names to be mirrored.

When this list is provided, the `license_blacklist`, `blacklist` and `whitelist` keys are not allowed to be set.

license_blacklist

A list of licenses to be excluded from the mirror.

The license families that can be blacklisted are:

- AGPL
- APACHE
- BSD
- GPL2
- GPL3
- LGPL

- MIT
- PROPRIETARY
- PUBLICDOMAIN
- PSF
- OTHER
- NONE

blacklist

A list of package names to be excluded from the mirror.

whitelist

A list of package names to be included in the mirror.

The whitelist overrides the blacklists. If a package is both blacklisted and whitelisted, then it is included and mirrored.

EXAMPLE: The package `numpy` has a license in the license family `BSD`.

If `license_blacklist` contains `BSD` and `whitelist` is empty, then `numpy` and all other BSD licensed packages are excluded and not mirrored.

If `license_blacklist` contains `BSD` and `whitelist` contains `numpy`, then the `numpy` package is included and mirrored and other BSD licensed packages are excluded and not mirrored.

dest_channel

Optional channel to use when synchronizing with a local Repository instance.

DEFAULT: “anaconda”

dest_site

Optional site to use when synchronizing with a local Repository instance.

DEFAULT: None

delta

If `delta` is true, then a delta is generated from `mirror_dir`.

If `delta` is false, then the changes are applied directly.

delta_dir

The delta is generated (or merged) onto this directory.

If this is not specified, the generated delta directory is named `delta-<timestamp>-pkgs`. `<timestamp>` is replaced with a timestamp.

max_retries

The number of retries to allow before failing.

When it is set to 0, `cas-mirror` fails at the first error. Default is 0.

This is supported only for the `cas-sync` and `cas-sync-api-v4` commands.

DEFAULT: 0

safe

If `safe` is `true`, synchronizing repositories or merging delta directories never delete anything.

DEFAULT: `false`

repodata_source

Uses a `repodata.json` (or `repodata.json.bz2`) as the source of existing packages.

This file must be in the mirror directory for a specific platform.

EXAMPLE: `/mirror/linux-64/repodata.json`

Mirroring a platform-specific list

By default, `cas-sync` and `cas-sync-api-v4` mirror all platforms. If you do not need all platforms, you can save time and disk space by editing the `yaml` file to specify which platform(s) you want to mirror.

EXAMPLE:

```
platforms:
  - linux-64
  - win-32
```

Mirroring a package-specific list

You may want to mirror only a small subset of the repository. Rather than blacklisting a long list of packages you do not want to be mirrored, you can instead simply enumerate the list of packages you do want to mirror.

EXAMPLE: This example mirrors only the three packages Accelerate, PyQt and Zope. All other packages are ignored:

```
package_list:
- accelerate
- pyqt
- zope
```

Mirroring Python version-specific packages

You may want to mirror only a subset of versions.

EXAMPLE: This example mirrors only Anaconda packages built for Python 3.3:

```
python_versions:
  - 3.3
```

Mirroring with a license blacklist

As of Repository 2.26.0, the Anaconda mirroring script supports license blacklisting for the following license families:

- AGPL
- APACHE
- BSD
- GPL2
- GPL3
- LGPL
- MIT
- PROPRIETARY
- PUBLICDOMAIN
- PSF
- OTHER
- NONE

EXAMPLE: This example mirrors all the packages in the repository except those that are GPL2-, GPL3- or BSD-licensed:

```
license_blacklist:
  - GPL2
  - GPL3
  - BSD
```

Mirroring with a blacklist

The `blacklist` allows access to all packages except those explicitly listed.

EXAMPLE: This example mirrors the entire Repository except the bzip2, tk and openssl packages:

```
blacklist:
  - bzip2
  - tk
  - openssl
```

Mirroring with a whitelist

The whitelist functions in combination with either the license_blacklist or blacklist arguments, and re-adds packages that were excluded by a previous argument.

EXAMPLE: This example mirrors the entire Repository except any GPL2- or GPL3-licensed packages, but including readline, despite the fact that it is GPL3-licensed:

```
license_blacklist:
  - GPL2
  - GPL3
whitelist:
  - readline
```

Combining multiple mirror configurations

You may find that combining two or more of the arguments above is the simplest way to get the exact combination of packages that you want.

The platforms argument is evaluated before any other argument.

EXAMPLE: This example mirrors only linux-64 distributions of the dnspython, shapely and gdal packages:

```
platforms:
  - linux-64
package_list:
  - dnspython
  - shapely
  - gdal
```

If the license_blacklist and blacklist arguments are combined, the license_blacklist is evaluated first, and the blacklist is a supplemental modifier.

EXAMPLE: In this example, the mirror configuration does not mirror GPL2-licensed packages. It does not mirror the GPL3-licensed package PyQt because it has been blacklisted. It does mirror all other packages in Repository:

```
license_blacklist:
  - GPL2
blacklist:
  - pyqt
```

If the blacklist and whitelist arguments are both employed, the blacklist is evaluated first, with the whitelist functioning as a modifier.

EXAMPLE: This example mirrors all packages in the repository except astropy and pygments. Despite being listed on the blacklist, Accelerate is mirrored because it is listed on the whitelist:

```
blacklist:
 - accelerate
 - astropy
 - pygments
whitelist:
 - accelerate
```

Verifying the checksum of a file

To help ensure that a file was correctly uploaded or synced you can use the checksum tool. This routine fetches a file from a database and verifies that the stored hash checksum and the calculated hash checksum of the file on disk are the same.

On a package's page, view the file list and click the Info button next to a file to see the file's keyname.

To check the file's hash checksum run:

```
anaconda-server-checksum keyname
```

NOTE: Replace "keyname" with the file's keyname.

The output will be either `Hashes are the same` or `Hashes differ`.

To overwrite the old hash checksum in the database with the new hash checksum you calculated, use the option `--fix`.

Customizing installers

Anaconda Enterprise 4 Repository can distribute copies of the Anaconda Distribution installer and the Miniconda installer that are pre-configured to use your installation of Repository.

This applies to Anaconda Distribution version 4.1 and higher, and Miniconda version 4.1.11 and higher.

By default the installers will be stored in `$PREFIX/opt/anaconda-server/installers`. If you prefer to store the installers in a different location, configure a new path:

```
anaconda-server-config --set INSTALLER_DIR /preferred/directory
```

Note: Replace `/preferred/directory` with the path to the directory where you prefer to store the installers.

If necessary, edit the script below and replace `"5.2.0"` with the current version number.

To download the installers:

```
mkdir -p /tmp/extras
pushd /tmp/extras

URL="https://repo.anaconda.com"

version="5.2.0"
miniconda="Miniconda3-latest-Linux-x86_64.sh \
    Miniconda3-latest-MacOSX-x86_64.sh \
    Miniconda3-latest-Windows-x86.exe \
    Miniconda3-latest-Windows-x86_64.exe \
    Miniconda-latest-Linux-x86_64.sh \
    Miniconda-latest-MacOSX-x86_64.sh \
    Miniconda-latest-Windows-x86.exe \
    Miniconda-latest-Windows-x86_64.exe"
anaconda="Anaconda2-$version-Linux-x86_64.sh \
    Anaconda3-$version-Linux-x86_64.sh \
    Anaconda2-$version-MacOSX-x86_64.sh \
    Anaconda3-$version-MacOSX-x86_64.sh \
```

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```
    Anaconda2-$version-MacOSX-x86_64.pkg \
    Anaconda3-$version-MacOSX-x86_64.pkg \
    Anaconda2-$version-Windows-x86_64.exe \
    Anaconda3-$version-Windows-x86_64.exe"

for installer in $miniconda; do
    curl -O $URL/miniconda/$installer
done
for installer in $anaconda; do
    curl -O $URL/archive/$installer
done

# Move the files into the installers directory
popd
cp -a /tmp/extras $PREFIX/opt/anaconda-server/installers
```

The installers will be available for download from `http://your.anaconda.server:port/downloads`.

Note: Replace `your.anaconda.server:port` with the name or IP address and port of your Anaconda server.

The downloadable file will be a zip file containing the Anaconda distribution and the configuration files specific to your Repository. These zip files are cached in the server's configured storage for quick retrieval.

Check that the `SERVER_NAME` *setting* has been set so you generate the correct URLs in the next step.

To pre-generate these installer bundles based on the downloaded installers, or to re-generate after downloading new installers, execute the command:

```
anaconda-server-admin update-installers
```

Caution: Newer versions of Anaconda and Miniconda have an updated version name formatting that this command does not recognize. You *must* update the installer file name for the command to work.

Example file renaming

If you downloaded the installer file `Anaconda3-<VERSION>-1-Windows-x86_64.exe`, you must remove the `-1` from the file name like this: `Anaconda3-<VERSION>-Windows-x86_64.exe`

This command requires that the *SERVER_NAME setting* be set in order to generate the correct URLs.

By default, the included `conda` installation will point to the default `anaconda` and `r-channel` accounts on your Anaconda Enterprise 4 Repository server, if those accounts exist.

You can change these default channels by setting the `DEFAULT_CHANNELS` *setting*, and then running the `anaconda-server-admin update-installers` command.

Configuration reference

Files

Anaconda Enterprise 4 Repository loads configuration files with the extension `.yaml` from the following locations:

- `/etc/binstar/`
- `/etc/anaconda-server/`
- `$PREFIX/etc/anaconda-server`

NOTE: `$PREFIX` is the location where repository is installed.

Files are loaded from these directories in order, with later files overriding earlier files. Files are loaded from each directory in alphabetical order.

If an environment variable `ANACONDA_SERVER_CONFIG` is set with the path of a configuration file, this file is loaded after the three already listed. Its settings override any conflicting settings in the earlier files.

Each configuration setting variable can have its value set with the `anaconda-server-config --set` command, or by editing a configuration file.

EXAMPLE: To set a value named VALUE_ONE to 50, add this to a configuration file:

```
VALUE_ONE: 50
```

Or, you can set a value named VALUE_ONE to 50 with this command:

```
anaconda-server-config --set VALUE_ONE 50
```

Logging

The location of the server's log file is defined in the supervisord configuration file `$PREFIX/etc/supervisord.conf` by the `stdout_logfile` config entry located in the [program:anaconda-server] section.

Advanced configuration of logging requires setting a LOGGING key on the server's config.yaml. It uses Python's logging module config structure.

Usernames

USER_REGEX

A regular expression that defines the allowable user names.

For example, this setting specifies that user names contain only lowercase letters, periods, plus and minus characters (`.`, `+` and `-`):

```
USER_REGEX: '^[a-z.+-]+$'
```

NOTE: The default value for `USER_REGEX` is `^[a-z0-9_][a-z0-9_-]+$` which translates to: at least one alphanumeric character or underscore, followed by zero or more alphanumeric, dash or underscore characters.

NOTE: Escape any extra instances of the single quote character `'` as `\'`. Do not use the slash and ampersand characters `/` and `&`, which have special meanings in URLs.

NOTE: If USER_REGEX is changed and the server is restarted, existing usernames that do not match the new USER_REGEX do not cause errors.

Database

Repository uses MongoDB as the database back end.

MONGO_URL

A MongoDB connection URI is used to connect to the MongoDB database server. It can be used to configure the hostname and port, as well as database authentication.

For example:

```
MONGO_URL: mongodb://anaconda-server:Pa55w0rd@mongodb.serv/
```

MONGO_DBNAME

The MongoDB database where Repository stores its data.

MQ_DBNAME

The MongoDB database where Repository stores data used for asynchronous processing.

MONGO_REPLICA_SET

The name of a MongoDB replica set Repository connects to after establishing a connection to the database server.

File storage

Repository can serve package contents from a local file-system, or from Amazon Web Services Simple Storage Service: AWS S3.

Storage_type

The storage mechanism to use. Valid choices are `fs`, for file-system storage, or `s3`, for AWS S3 storage.

keyname_full_path

When this option is set, Repository stores the files by full paths and not just by hashes. This way a tensorflow file uploaded by the user *Bob* will be stored on `<fs_storage_root>/Bob/tensorflow/osx-64/tensorflow-1.1.0-np112py36_0.tar.bz2-594ac56e7e042600648defdb`.

NOTE: The storage path does not always contain the current file owner and their user name. This is because the file location on the storage does not change when you rename a user or transfer a file to a different user.

Fs_storage_root

If configured to use file-system storage, the absolute path to a directory where Repository stores all uploaded packages.

PACKAGE_BUCKET_ID

If configured to use AWS S3 storage, the name of an AWS S3 bucket where Repository stores uploaded packages.

You can identify the name of your bucket by using `<bucket>` in your `http://<bucket>.s3.amazonaws.com` URL.

S3_REGION_NAME

The S3 region that the bucket is located in. The available regions can be found in the Amazon AWS documentation.

S3_SERVER_SIDE_ENCRYPTION

This variable can be set to `AES256` to enable server-side encryption for packages stored in the S3 bucket.

Notebooks

MAX_IPYNB_SIZE

Specifies the maximum allowed size when uploading notebooks to the server. The default is 25 MB. This variable can be set in `config.yaml`.

Web server

SERVER_NAME

The name and port number of the server. This option is required for subdomain support.

For example:

```
SERVER_NAME: anaconda.srv:8080
```

port

The port number of the server. Defaults to `8080`.

subdomains

If set to `true`, Repository serves `conda` package from a separate subdomain. Defaults to `false`.

For example:

```
SERVER_NAME: anaconda.srv:8080
subdomains: true
```

Allows access to conda packages at `http://conda.anaconda.srv:8080/`.

SESSION_COOKIE_DOMAIN

The domain that Repository sets on the session cookie. If this is not set, the cookie is valid for all subdomains of `SERVER_NAME`.

See *Securing user-created content*.

USER_CONTENT_DOMAIN

As a cross-site scripting (XSS) protection, notebook content can be served from a separate domain name. If this option is configured, Repository only serves rendered notebooks from this domain.

See *Securing user-created content*.

ssl_options

Repository can serve content over HTTPS, using user-provided SSL certificates.

For example:

```
ssl_options:
    certfile: /etc/anaconda-server/server.crt
    keyfile: /etc/anaconda-server/server.key
PREFERRED_URL_SCHEME: https
```

certfile

The absolute path to a PEM-formatted X.509 certificate file.

keyfile

The absolute path to a PEM-formatted private key for the associated certificate.

ssl_version

An integer that specifies the SSL protocol version as defined by Python's `ssl` module:

```
PROTOCOL_SSLv2 = 0
PROTOCOL_SSLv23 = 2
PROTOCOL_SSLv3 = 1
PROTOCOL_TLS = 2
PROTOCOL_TLSv1 = 3

PROTOCOL_TLSv1_1 = 4
PROTOCOL_TLSv1_2 = 5
```

The default is `5` (TLS v1.2).

PREFERRED_URL_SCHEME

The preferred scheme that is used to generate URLs. Set this to `https` if HTTPS is configured.

gunicorn

Repository uses Gunicorn. The most commonly used options are `timeout` and `workers`. A complete list of settings can be found in Gunicorn's documentation.

For example:

```
gunicorn:
    timeout: 60
    workers: 5
```

timeout

The number of seconds for which a worker is allowed to process a request, before being forcefully terminated.

Default: 120

workers

The number of workers that Gunicorn spawns to serve Repository. Defaults to 2 × the number of CPUs + 1.

Authentication

AUTH_TYPE

The method Repository uses to authenticate users. Valid choices are `NATIVE`, for built-in authentication, `KERBEROS`, for Kerberos, and `LDAP`.

KRB5_HOSTNAME

See *Kerberos configuration options*.

KRB5_SERVICE_NAME

See *Kerberos configuration options*.

KRB5_KTNAME

See *Kerberos configuration options*.

LDAP

Options for configuring LDAP authentication and group synchronization.

For example:

```
LDAP:
  # Replace with company LDAP server
  URI: 'ldap://<ldap.company.com>'
  # Replace <uid=%(username)s,ou=People,dc=company,dc=com> with your company specific␣
↪LDAP Bind/Base DN
  # Bind directly to this Base DN.
  BIND_DN: '<uid=%(username)s,ou=People,dc=company,dc=com>'
  # password of the user specified in the BIND_DN
  BIND_AUTH: abc123456

  USER_SEARCH:
      base: cn=Users,dc=example,dc=com
      filter: sAMAccountName=%(username)s

  # Map LDAP keys into application specific keys
  KEY_MAP:
      name: 'cn'
      company: 'o'
      location: 'l'
      email: 'mail'

  OPTIONS:
      OPT_NETWORK_TIMEOUT: 60
      OPT_TIMEOUT: 60
```

NOTE: To use LDAP with SSL, set the `USER_REGEX` and `account_names_filter` options:

```
account_names_filter: false
USER_REGEX: ^[a-z0-9_][a-z0-9_-.]+$
LDAP:
    [configuration continues as above with URI, BIND_DN, and so on]
```

See *Using LDAP and TLS configuration options*.

LOCK_DOWN

Makes all views with the exception of the login form and welcome page, unaccessible to anonymous users.

Email

Repository can be configured to send email for various reasons, including to reset forgotten usernames and passwords. Email can be sent using SMTP protocol, or through Amazon Web Services Simple Email Service (AWS SES).

SMTP_HOST

The hostname of the SMTP server.

SMTP_PORT

The port of the SMTP server.

SMTP_TLS

If set to `true`, Repository attempts an SSL connection to the SMTP server.

SMTP_USERNAME

The username to authenticate against the SMTP server before attempting to send email.

SMTP_PASSWORD

The password to authenticate against the SMTP server before attempting to send email.

USE_SES

If set to `true`, Repository sends email with AWS SES. To authenticate to AWS, the server should be configured with an appropriate IAM role, or have credentials specified in a Boto configuration file.

RETURN_ADDRESS

The `From:` email address that Repository uses as sender.

ALLOW_DUPLICATED_EMAILS

If set to `true`, Repository allows different users to share the same email or secondary email. Defaults to `false`.

require_email_validation

If set to `true`, Repository emails new users a unique token to validate their email address before permitting them to log in.

Advanced

AVATAR_METHOD

The method to use to generate the user avatar URL. Valid choices are:

- 'gravatar' to use the gravatar.com service
- 'default' to show a predefined static icon
- 'static' to use a custom static URL

AVATAR_GRAVATAR_URL

A URL for a Gravatar compatible service. Default: `https://www.gravatar.com/`. This URL is used as the prefix to build a valid gravatar URL.

AVATAR_STATIC_URL

A static URL to use when `AVATAR_METHOD` is set to `static`. Defaults to an empty string.

CONSTRUCTOR_TIMEOUT

The timeout in seconds for the call to `constructor` while building installers, parcels and management packs. Defaults to 60 seconds.

CONSTRUCTOR_TOKEN_TIMEOUT

To provide access to private packages while building an installer, a temporary token is created. It must be valid during the call to `constructor` and it should expire soon after the call completes. `CONSTRUCTOR_TOKEN_TIMEOUT` sets the token's valid lifetime in seconds. Defaults to 60 seconds. This value should be greater than or equal to `CONSTRUCTOR_TIMEOUT`.

CONSTRUCTOR_ALLOWED_OPTIONS

A list of `constructor` option names that are allowed to be included in the installer construction form. The default is `[]` (no options are allowed).

PARCELS_ROOT

The prefix with which Cloudera parcels are generated. Defaults to `/opt/cloudera/parcels`.

PARCEL_DISTRO_SUFFIXES

The distributions for which Cloudera parcels are generated. Defaults to `['el5', 'el6', 'el7', 'lucid', 'precise', 'trusty', 'wheezy', 'jessie', 'squeeze', 'sles11', 'sles12']`.

For example, if you want to support only Ubuntu:

```
PARCEL_DISTRO_SUFFIXES:
    - lucid
    - precise
    - trusty
```

DEFAULT_CHANNELS

The Repository accounts that environments installed with the *bundled Anaconda distributions* pull packages from. Defaults to `['anaconda', 'r-channel']`.

For example, to add an additional `custom` account:

```
DEFAULT_CHANNELS:
    - anaconda
    - r-channel
    - custom
```

CONSTRUCTOR_TMPDIR

When `constructor` builds an installer it stores the configuration in this temporary directory. The default is `None`, which tells `constructor` to create a temporary directory using Python's `tempfile.mkdtemp`.

STANDARD_LABELS

A list of standardized labels. If a user defines a label that is not listed as standard, a warning notice will be shown in the package's page. Defaults to `['main', 'dev', 'alpha', 'beta', 'broken']`.

CONDA_CACHE_SIZE

The maximum size (in bytes) of the `repodata.json` requests cache. Set to `0` to disable `repodata.json` caching. Default: 1 Gb. When the maximum size is reached, the 10 least recently used entries of the cache are evicted.

CACHE_METHOD

The method used for caching repodata info. It can either be `tempfile` (the prior method of caching) or `diskcache`, which uses SQLite as a back-end. Default: `diskcache`.

REMEMBER_COOKIE_ENABLED

Sets whether to use the *remember me* cookie to keep the session alive. If it's set to true the `REMEMBER_COOKIE_DURATION` setting is relevant, and if it's set to false, the `PERMANENT_SESSION_LIFETIME` is relevant. Defaults to `true`.

PERMANENT_SESSION_LIFETIME

An integer that sets how many **minutes** the session will live. Only used when `REMEMBER_COOKIE_ENABLED` is false. Default is 44640 (31 days).

REMEMBER_COOKIE_DURATION

An integer that sets how many **minutes** the session will live when using the *remember me* cookie. Only used when `REMEMBER_COOKIE_ENABLED` is true. Default is 525600 (365 days).

SUPERUSER_ORG_ADMIN

Whether superusers should automatically be granted admin rights on organizations. Default is `false`.

NEXT_URL_WHITELIST

List of hostnames that are marked as safe when redirecting requests due to the presence of a "next" request parameter. It is mainly used under an Anaconda Enterprise Notebooks Single Sign-on Set-up. The default is [] (no external redirects are safe).

NEXT_URL_WHITELIST_REGEXP

A regular expression to match hostnames that are marked as safe when redirecting requests due to the presence of a "next" request parameter. It is mainly used under an Anaconda Enterprise Notebooks Single Sign-on Set-up. The default is '(?!)' which matches nothing, so only local redirects are allowed.

Repository has two installation options:

- *Online*: If you have internet access on the destination server, follow the online instructions.
- *Air gap*: If you have an air gapped system or the destination server does not have internet access, follow the air gap instructions.

Repository provides *advanced configuration options* that can be used to meet site-specific needs.

Repository includes a number of *optional components* that can be installed and used individually.

You may also want to see *Updating Repository* and *Uninstalling Repository*.

User management

Adding a user

New users can navigate in a browser to your local Repository web page and sign themselves up for an account, or you can add them using the command line:

1. Set the `USER_PASSWORD` environment variable (e.g., `export USER_PASSWORD=abc123DEF`).
2. Run the `anaconda-server-create-user` command, with the following syntax:

```
anaconda-server-create-user [-h] -u USERNAME [-e EMAIL] [--superuser]
```

EXAMPLE:

```
anaconda-server-create-user --username jsmith --email jsmith@your-domain.com --superuser
```

Searching for users

As of Anaconda Enterprise 4 Repository version 2.33.5, you can search for users by username or email address. Open this URL in a browser:

```
http://your.anaconda.server:port/admin/users
```

NOTE: Replace "your.anaconda.server:port" with the name or IP address and port of your Anaconda server.

Promoting an existing user

As of Anaconda Enterprise 4 Repository version 2.28, administrators can use the Administration Accounts page to promote users to staff or superuser status.

Viewing rights of staff and superuser

The staff user and superuser can view the following sections of the Administration page:

- Reports.
- User administration.
- License downloads.
- Trial licenses.
- Current LDAP configuration.
- Current server configuration.
- Downloads summary.
- Downloads from a specific address.

- Security feed and security feed details.
- Storage administration.

Privileges of staff and superuser

The staff user and superuser have the following privileges:

- Create licenses.
- Download a CSV of the user database.
- Search for a package in the Administration panel.
- Resend confirmation emails to users.
- Resend password reset emails to users.
- Download a CSV with the users emails.

Additional rights of superuser

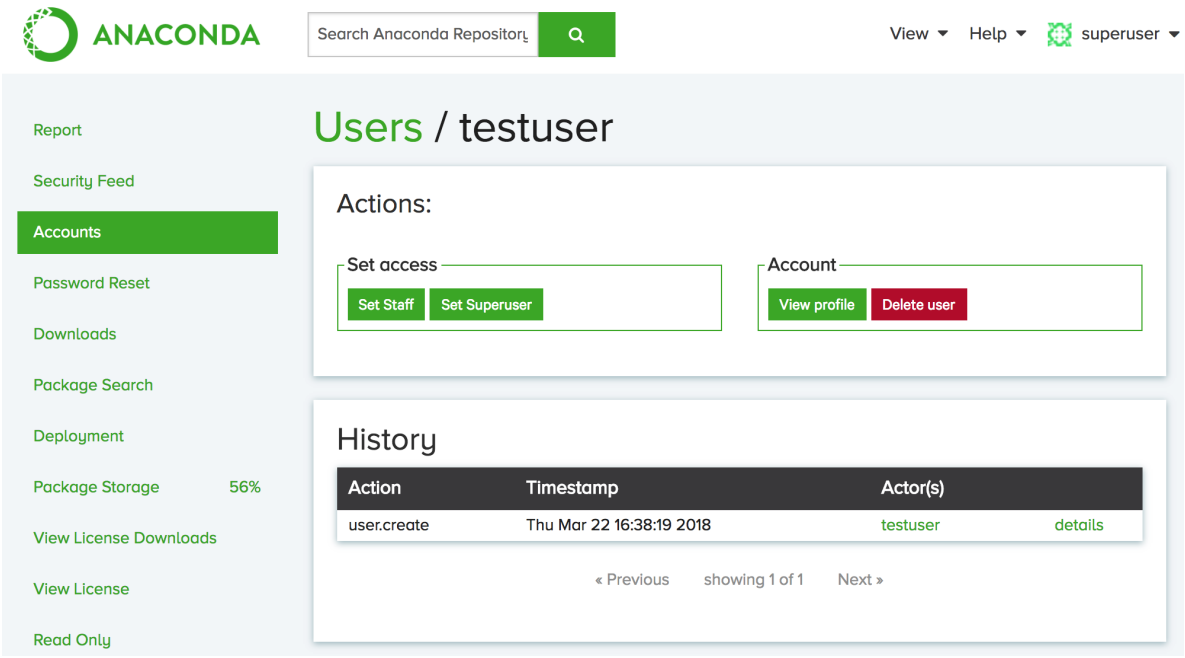
In addition to all of the above, a superuser can also view the following on the Administration page:

- Plans.
- User details.

To promote an existing user to a staff user or superuser:

1. On the Administration page, in the left navigation pane, select Accounts.
2. Select the username you want to promote.

   Repository displays the user information page:



3. Click the Set Staff button to give the user staff privileges or click the Set Superuser button to give the user superuser privileges.

4. In the dialog box that appears, retype the user's name.
5. Click the Set button.

Resetting user passwords

If a user forgets their password, you can request a reset link to provide to the user.

To send emails, Repository must have the *email settings* configured.

1. Log in to your Repository administrative account.
2. From the top **Tools** menu, select Admin.
3. From the left navigation pane, select Password Reset.
4. Enter the user's email address.

   The Web UI generates a password reset link.
5. Email the link to the user.

You can also reset passwords without sending emails:

```
anaconda-server-admin reset-password jsmith
```

NOTE: Replace `jsmith` with the username whose password you want to reset.

Resending welcome emails to new users

To send emails, Repository must have the *email settings* configured.

If a user reports that they did not receive their welcome email after registering on your local Repository web page, it may have been caught in a spam filter.

Follow the above instructions for resetting user passwords.

Changing a user's storage size or changing their plan to free unlimited

To change a user's storage size or plan:

1. Log in to your Repository administrative account.
2. From the top **Tools** menu, select Admin.
3. From the left navigation pane, select Accounts.
4. Select the username of the user whose account you want to change.
5. To update the storage limits click Update Storage.
6. To set the user's plan to free and unlimited, click Set free unlimited plan.

Removing a user

1. Log in to your Repository administrative account.
2. From the top **Tools** menu, select Admin.
3. From the left navigation pane, select Accounts.
4. Select the username of the user you want to remove.
5. Click the Delete user button.
6. Optional: Use `anaconda-server-admin clean-storage` to remove files from that user's account.

System management

Recommended workflow

One of the most useful features of Anaconda Enterprise 4 Repository is its ability to help manage package development and deployment in a seamless fashion. This page describes the development process and channel usage employed by one of our internal teams, to serve as an example of how you can leverage channels for workflow separation.

Multiple channels allow our team to maintain separate package states and easily earmark and control the versions and states of packages that users can install.

Our team created the following channels:

- Master.
- Staging.
- Release.

We have used this workflow through 4 release cycles and it has worked out well for us.

Master

A master is created any time something is merged into our master branch. It is considered the development build of all of the components that make up the software. Code that makes it to this channel should be stable and should have been confirmed independently, but a full QA test has not been run on it yet.

Staging

Once we are ready to start working on a release, we create a staging:X.Y.Z branch. This contains all code that is going to go into a release. No new features should be introduced at this point, just any last minute bug fixes to existing code.

Release

The staging channel gets culled so that only the latest package is maintained in it. Any alpha, beta, or dev packages are removed. After all testing is complete, all issues are resolved, and the channel contains only one version of each package, we copy that package into a release:X.Y.Z channel, then lock that channel.

Performing general maintenance

To maintain a Repository installation, perform all of these tasks regularly:

- Review the error logs at `/var/log/anaconda-server`
- *Back up* the file system and database.
- Update the anaconda-server package with the command:

```
conda update anaconda-server
```

Anaconda Enterprise 4 Repository backup and restore procedure

This guide is for backing up and restoring an Anaconda Enterprise 4 Repository instance that uses local file system storage. If your instance uses Amazon S3 or any other storage provider, please consult their specific documentation on backup and restore procedures.

Before you start

These instructions are for a Repository that is:

- Installed in the directory `/home/anaconda-server/repo` as suggested by the installation guide.
- Owned by the `anaconda-server` user.
- Using the storage directory `/opt/anaconda-server/package-storage`.
- Storing the configuration file in `/etc/anaconda-server`.

If any of these items are different for your instance, modify these instructions accordingly.

- Unless noted, run all shell commands while logged in as the `anaconda-server` user. Using `sudo` privileges, log in as the `anaconda-server` user with this command:

```
sudo su - anaconda-server
```

- Execute all commands in the working directory `/home/anaconda-server`:

```
$ pwd
/home/anaconda-server
```

Backup

Before starting the backup process, shut the service down using `supervisorctl`:

```
$ supervisorctl stop all
anaconda-server: stopped
$ supervisorctl status
anaconda-server                  STOPPED    Jul  6 05:05 PM
```

Make a `$VERSION` environment variable and set it to the version of the currently installed Anaconda Enterprise 4 Repository:

```
$ VERSION=`conda list anaconda-server --json | python -c 'import sys, json; print json.
↪load(sys.stdin)[0]["version"]'`
$ echo $VERSION
2.33.27
```

This version string will be used in all backup file names.

It's also useful to add a timestamp to the files, so generate one now:

```
$ TIMESTAMP=`date +%Y-%m-%d`
$ echo $TIMESTAMP
2018-07-30
```

Code/Binaries

Generate a tarfile archive with the installed code, binaries and any dependencies:

```
$ tar -cpsf anaconda-server-repo-$VERSION-$TIMESTAMP.tar --exclude var/run -C /home/
↪anaconda-server repo/
$ sha1sum anaconda-server-repo-$VERSION-$TIMESTAMP.tar > anaconda-server-repo-$VERSION-
↪$TIMESTAMP.tar.sha1
```

Notice that this also generated a SHA1 checksum. This checksum will be used to verify when you restore the archive.

Configuration

This step is necessary only if you stored Anaconda Enterprise 4 Repository's configuration in a custom location outside of the instance installation folder (usually `/home/anaconda-server/etc/`).

These commands show how to generate the tarfile if the configuration is stored in `/etc/anaconda-server`.

Generate the tarfile with its SHA1 checksum:

```
$ tar -cpsf anaconda-server-etc-$VERSION-$TIMESTAMP.tar /etc/anaconda-server
$ sha1sum anaconda-server-etc-$VERSION-$TIMESTAMP.tar > anaconda-server-etc-$VERSION-
↪$TIMESTAMP.tar.sha1
```

Storage

As before, create a tarfile archive and its checksum with the contents of the package storage location:

```
$ tar -cpsf anaconda-server-package-storage-$VERSION-$TIMESTAMP.tar -C /opt/anaconda-
↪server/ package-storage
$ sha1sum anaconda-server-package-storage-$VERSION-$TIMESTAMP.tar > anaconda-server-
↪package-storage-$VERSION-$TIMESTAMP.tar.sha1
```

Database

Generate a dump of Anaconda Enterprise 4 Repository's MongoDB database. Anaconda recommends you follow MongoDB's guidelines for backup and restore. This guide uses MongoDB tools:

```
$ mongodump --host=127.0.0.1 --port=27017 --archive=anaconda-server-mongodb-$VERSION-
↪$TIMESTAMP.archive
$ sha1sum anaconda-server-mongodb-$VERSION-$TIMESTAMP.archive > anaconda-server-mongodb-
↪$VERSION-$TIMESTAMP.archive.sha1
```

.bashrc

If you chose to let the Anaconda Enterprise 4 Repository installer update the `.bashrc` file of the user `anaconda-server`, back it up:

```
$ cp /home/anaconda-server/.bashrc anaconda-server-bashrc-$VERSION-$TIMESTAMP.sh
$ sha1sum anaconda-server-bashrc-$VERSION-$TIMESTAMP.sh > anaconda-server-bashrc-
↪$VERSION-$TIMESTAMP.sh.sha1
```

Restore

Before you start

- Verify that the restore environment meets the requirements listed in the *Installation Guide* for Anaconda Enterprise 4 Repository. You will need:
  - MongoDB (any supported version) installed
  - A user account (usually `anaconda-server`)
  - A storage directory (usually `/opt/anaconda-server/package-storage`) owned by the Anaconda Enterprise 4 Repository user account. This is only needed if you're using a local filesystem as a storage backend.
- Run all shell commands while logged in as the `anaconda-server` user, as you did when backing up Anaconda Enterprise 4 Repository. Using `sudo` privileges, log in as the `anaconda-server` user with this command:

  ```
  sudo su - anaconda-server
  ```

- Execute all commands in the working directory `/home/anaconda-server`.

Verify checksums

Verify the integrity of the backup files:

```
$ sha1sum --check *.sha1
anaconda-server-bashrc-2.33.27-2018-07-30.sh: OK
anaconda-server-mongodb-2.33.27-2018-07-30.archive: OK
anaconda-server-package-storage-2.33.27-2018-07-30.tar: OK
anaconda-server-repo-2.33.27-2018-07-30.tar: OK
```

.bashrc

If you backed up the `.bashrc` file of the user `anaconda-server`, restore it:

```
cp anaconda-server-bashrc-$VERSION-$TIMESTAMP.sh /home/anaconda-server/.bashrc
```

After restoring this file, log out and log in as `anaconda-server` again for the changes to take effect.

Database

If you followed the Anaconda Enterprise 4 Repository *Installation Guide*, MongoDB is up and running and you can use `mongorestore` to restore the database archive:

```
mongorestore --host=127.0.0.1 --port=27017 --db=binstar --archive=anaconda-server-
↪mongodb-$VERSION-$TIMESTAMP.archive
```

Storage

Assuming that the storage directory is `/opt/anaconda-server/package-storage`, restore it with:

```
tar -xpsf anaconda-server-package-storage-$VERSION-$TIMESTAMP.tar -C /opt/anaconda-
↪server/
```

Code/Binaries

Restore the code and binaries:

```
tar -xpsf anaconda-server-repo-$VERSION-$TIMESTAMP.tar -C /home/anaconda-server
```

Restore the `supervisord` configuration:

```
repo/bin/anaconda-server-install-supervisord-config.sh
```

The server should now be up and running. Check the status with `supervisorctl`:

```
$ repo/bin/supervisorctl status
anaconda-server                  RUNNING    pid 8446, uptime 0:03:18
```

Checking for Orphan Files or Packages

You can use the "orphan-check" tool to resynchronize the filesystem and the database if the filesystem and the database get out of sync.

The system can get out of sync when files in the filesystem are not referenced from the database, or when packages in the database do not have a corresponding file in the filesystem.

The orphan-check tool prints on stdout a list of files on the filesystem that are not referenced from the database:

```
anaconda-server-orphan-check --dryrun
```

You can use the *–json* option if you want a JSON representation of the output:

```
anaconda-server-orphan-check --json
```

NOTE: Running `anaconda-server-orphan-check` without arguments is the same as running `anaconda-server-orphan-check --dryrun`.

After you've viewed the list of files without references, "orphan-check –clean" can delete them:

```
anaconda-server-orphan-check --clean
```

You can also check for packages that have missing files:

```
anaconda-server-orphan-check --reverse
```

Then you can delete those file objects from the database:

```
anaconda-server-orphan-check --reverse --clean
```

Using optional components

Anaconda Enterprise 4 Repository includes a number of components that can be installed and used individually.

This section describes how to install and use two such tools:

- *cas-mirror*.
- *cas-installer*.

As a convention, all packages and commands that are part of the Repository product share the common `cas` prefix, which is short for Continuum Anaconda Server. (Anaconda, Inc. was formerly known as Continuum Analytics, Inc.)

All packages are installed using the `conda` command, which is part of the Miniconda installer. For Repository installation and configuration instructions, see *Installation*.

Using cas-mirror

The cas-mirror tool is a component of the Anaconda Enterprise 4 Repository Enterprise product.

The cas-mirror tool makes an exact copy of Anaconda's package Repository, or part of it, on a your local Repository server.

For more information about the cas-mirror tool's functionality and configurable options, see *Configuring local mirrors*.

Installing cas-mirror

To install the mirror tool, run:

```
conda install cas-mirror
```

After cas-mirror has been installed, the following commands are available:

```
cas-sync --help
cas-merge --help
cas-sync-api-v4 --help
cas-server --help
```

Using the cas-sync command

The `cas-sync` command brings the local mirror of Repository up-to-date with our remote servers.

To configure the location of the mirror on your file system, check the output of:

```
cas-sync --config
```

If necessary, create a configuration file, either `~/.cas-mirror` or system-wise `/etc/cas-mirror`, which contains the desired location of the local mirror on the file system, the platforms that should be mirrored and an optional blacklist of packages that which should not be mirrored.

EXAMPLE:

```
mirror_dir: /home/data/mirror
remote_url: ""  # where to get miniconda and anaconda installers -- blank to skip
# possible platforms are: linux-64, linux-32, osx-64, win-32, win-64 platforms:
  - linux-64
  - win-32
blacklist:
  - dnspython
  - shapely
  - gdal
```

Once you are satisfied with the mirror directory—which may be the default—run:

```
cas-sync
```

Running this command for the first time takes many hours, because the entire Repository is being downloaded. Subsequent runs take significantly less time.

Using the cas-server command

You need to run `cas-server` as root when you intend to serve on port 80.

To serve repository over HTTP, run:

```
cas-server
```

If needed, use the `--port` option to change the port on which the repository is being served.

Using the "delta" option

If you've already downloaded most of the Anaconda repository, and you're only interested in the changes since `cas-sync` was last run, you can use the `delta` configuration option:

```
mirror_dir: /home/data/mirror
remote_url: ""  # where to get miniconda and anaconda installers -- blank to skip
# possible platforms are: linux-64, linux-32, osx-64, win-32, win-64
platforms:
  - linux-64
  - win-32
blacklist:
  - dnspython
  - shapely
  - gdal
delta: true
delta_dir: delta_pkgs
```

Instead of mirroring to the existing local repository, it will record the necessary changes to bring the mirror up to date in a separate directory (`delta_pkgs` in this case). You can then use this generated directory to update air-gapped mirrors using the `cas-merge` command.

The `cas-merge` command takes a delta directory and combines its contents with an existing mirror directory. New packages are added, missing packages are deleted, and the repodata is updated.

If instead of mirroring to a local directory, you want to make the changes directly into an existing Anaconda Enterprise 4 Repository instance, the `cas-sync-api-v4` can be used. You'll need to use the `dest_site` config option:

```
mirror_dir: /home/data/mirror
remote_url: ""  # where to get miniconda and anaconda installers -- blank to skip
# possible platforms are: linux-64, linux-32, osx-64, win-32, win-64
platforms:
  - linux-64
  - win-32
blacklist:
  - dnspython
  - shapely
  - gdal
dest_site: some_site
```

Make sure that the site is defined in the anaconda config and you're properly logged into it before invoking `cas-sync-api-v4`.

More extensive information about the cas-mirror tool's functionality and configurable options is available at *Customizing mirrors*.

Using cas-installer

The cas-installer tool makes an environment installer, which is a bash script or Windows executable file that can be run on any machine to install an exact copy of a conda environment and its packages on that machine.

Installing cas-installer

A token from Anaconda is required to install cas-installer, and you should have received it when your organization purchased Repository, Workgroup or Enterprise. If you no longer have access to your token, submit a support ticket or contact us at Enterprise Support. You can also email support at the email address given to you by your sales representative.

When you have the token, run:

```
export TOKEN=<your_anaconda_cloud-token>
conda config --add channels https://conda.anaconda.org/t/$TOKEN/anaconda-server
```

Because this tool allows you to create an installer for a conda environment, it is important that the cas-installer package is installed into the root conda environment, not root user. The following command ensures that this happens:

```
conda install -n root cas-installer=1.3.2
```

Using the cas-installer command

Once installed, the `cas-installer` command is available:

```
cas-installer -h
```

The command takes an installer specification file as its argument, which specifies the name of the installer, the conda channel to pull packages from, the conda packages included in the installer, and so on.

EXAMPLE:

```
# ----------------- required -----------------
# name
name: test

# channels to pull packages from
# The &channels creates a back reference so that it can be reused as
# *channels in the conda_default_channels section below.
channels: &channels
  - https://repo.anaconda.com/pkgs/free/

# specifications
specs:
  - python
  - grin

# ----------------- optional -----------------
# platform e.g. linux-32, osx-64, win-32 defaults to current platform
# platform: linux-64
```

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```
# The conda default channels which are used when running a conda which
# was installed be the cas-installer created: requires conda---3.6.2 or
# greater---in the specifications. The *channels is a YAML reference to
# &channels above. It inserts all the channels from the channels key, so
# that they do not have to be typed twice.

conda_default_channels: *channels

# installer filename
# installer_filename: grin.sh

# default install prefix
default_prefix: /opt/anaconda
```

For Windows, the tool creates nsis-based .exe installers, which can only be created on a Windows platform, although the architecture may be different. For Unix, the tool creates bash-based .sh installer, which can only be created on Unix—Linux or macOS—systems.

Updating Repository

CAUTION: You must have a tested backup of your installation before starting the update process. If updating more than one version, all updates must be performed in sequential order.

Your support representative can provide you with a download URL for an updated Repository installer.

To update to the latest Repository release:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

NOTE: To use a Repository version from 2.33.3 through 2.33.10 and Anaconda Enterprise Notebooks with single sign-on (SSO), you must set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration. This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

NOTE: As of Repository 2.33.8, the `fs_storage_root` configuration setting is mandatory for local filesystem storage and the Repository server will not run without it. You can set it with this command:

```
anaconda-server-config --set fs_storage_root /opt/anaconda-server/package-storage
```

You may replace `/opt/anaconda-server/package-storage` with any location owned by the `anaconda-server` user.

Please contact your Professional Support Team contact or sales person if you have any questions or problems regarding the update.

Updating to current and previous versions

Updating to 2.33:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

NOTE: To use a Repository version from 2.33.3 through 2.33.10 and Anaconda Enterprise Notebooks with single sign-on (SSO), you must set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration. This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

NOTE: As of Repository 2.33.8, the `fs_storage_root` configuration setting is mandatory for local filesystem storage and the Repository server will not run without it. You can set it with this command:

```
anaconda-server-config --set fs_storage_root /opt/anaconda-server/package-storage
```

You may replace `/opt/anaconda-server/package-storage` with any location owned by the `anaconda-server` user.

Updating to 2.32:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.31:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.30:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.29:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.28:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.27:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.26.6:

The logging configuration can be removed. Logs have been moved to `$PREFIX/var/log/anaconda-server/`:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
anaconda-server-config --remove LOGGING
supervisorctl stop all
supervisorctl start all
```

Updating to 2.26:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.25:

```
curl '$INSTALLER_URL' > anaconda_repository.sh
bash anaconda_repository.sh -u
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.24:

```
conda update binstar-server binstar-static anaconda-client
anaconda-server-db-setup --execute
anaconda-server-install-supervisord-config.sh
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.23:

```
conda update binstar-server binstar-static anaconda-client
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.22:

```
conda update binstar-server binstar-static anaconda-client
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.21:

```
conda update binstar-server binstar-static anaconda-client
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.20:

```
conda update binstar-server binstar-static anaconda-client
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.19:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl stop all
supervisorctl reload
supervisorctl start all
```

Updating to 2.18:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl stop
supervisorctl reload
supervisorctl start all
```

Updating to 2.17:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl stop
supervisorctl reload
supervisorctl start all
```

Updating to 2.16:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.15:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.14:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.13:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
anaconda-server-config --config-file /etc/binstar/config.yaml --set LABEL_NAME "'channel'
↪"
supervisorctl restart all
```

Updating to 2.12:

```
conda update binstar-server anaconda-client anaconda-build
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.9:

```
conda update binstar-static binstar-server cas-mirror
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.8:

```
conda update binstar-static binstar-server cas-mirror
anaconda-server-db-setup --execute
supervisorctl restart all
```

Updating to 2.6.0:

```
conda update binstar-server
conda install cas-mirror
```

Updating to 2.5.1:

```
conda update binstar-server
```

Updating to 2.3:

```
conda update binstar-server
conda install cas-mirror
```

Updating to 2.2:

```
conda update binstar-server
```

Uninstalling Repository

Before deleting Repository, you may want to make a backup for security reasons. For suggestions on mongo backups, see https://docs.mongodb.org/manual/reference/program/mongodump/ .

To delete Repository:

1. Check the file storage path:

   ```
   anaconda-server-config --get fs_storage_root
   ```

2. Delete the contents of `/home/anaconda-server/repo`:

   ```
   rm -rf /home/anaconda-server/repo
   ```

3. Delete the appropriate MongoDB database, "binstar."
4. Delete the contents of `/etc/binstar`:

   ```
   rm -rf /etc/binstar
   ```

5. Delete the contents of the Repository file storage path.

Troubleshooting

This page provides instructions for troubleshooting issues that may occur with your Anaconda Enterprise 4 Repository installation.

Cannot connect to the server on port x

This could be because you are behind a firewall. Check if your IPTables rules are blocking your ports:

```
iptables -L -n
```

If a rule blocks a port you want to use, then you must allow the port:

```
sudo iptables -t nat -F
sudo iptables -A INPUT -p tcp -m tcp --dport <PORT> -j ACCEPT
sudo service iptables save
sudo service iptables restart
```

Error: "No environment named 'search' exists in..." on Windows

If Anaconda Client is not yet installed and you try to search for a package on Anaconda.org using the `anaconda` command, you may receive the following error message:

```
C:\Users\USERNAME>anaconda search -t conda PACKAGE
No environment named "search" exists in C:\anaconda\envs
```

This error occurs because the Windows version of Anaconda contains an `anaconda.bat` file that is used for setting environment paths and switching environments. If Client is not installed, this batch file is called instead. Once you install Client, the Anaconda `search` command will work:

```
conda install anaconda-client
anaconda search -t conda PACKAGE
```

Anaconda upload fails while behind a reverse proxy

When configuring Client to connect to a Repository behind a reverse proxy, the `anaconda upload` command may appear to try connecting to the internal hostname rather than the external configured one.

This can be corrected in the settings of the reverse proxy, such as NGINX or Apache.

In NGINX, add the setting `proxy_set_header Host $host;` to access the internal host with the external hostname.

In Apache, turn on the option `ProxyPreserveHost`.

Other reverse proxies each have their own settings to handle hostnames correctly.

EXAMPLE: Some other reverse proxies use a settings syntax such as `http_proxy=id:passwd@proxyhost:port`.

Start Repository application as a foreground process

Repository should normally be started as a daemon. For troubleshooting, it can instead be started as a foreground process on a specified port:

```
anaconda-server --port 8080
```

Stop the application with Control-C.

Administrative commands

Many of these actions can be done in the web interface. This command reference is for those administrators who prefer to use command line shortcuts.

In all examples below, replace "jsmith" with the name of the user whose settings you wish to change.

Reset a user's password interactively:

```
anaconda-server-admin reset-password jsmith
```

The above command will prompt you to enter the new password twice. You may also reset the password directly:

```
anaconda-server-admin reset-password --password abcDEF123! jsmith
```

NOTE: Replace “abcDEF123!” with the new password.

Set a user’s plan to a free and unlimited plan:

```
anaconda-server-admin free-unlimited-plan jsmith
```

Set all users with a given email domain to a free and unlimited plan:

```
anaconda-server-admin free-unlimited-plan-for-domain yourdomain.com
```

You can do a “dry run” of the command to display what the command will do without changing anything:

```
anaconda-server-admin free-unlimited-plan-for-domain --dry-run yourdomain.com
```

NOTE: Replace “yourdomain.com” with the domain whose users you wish to upgrade.

Give the user the privileges of a superuser or remove them:

```
anaconda-server-admin set-superuser jsmith
anaconda-server-admin unset-superuser jsmith
```

Give the user the privileges of a staff user or remove them:

```
anaconda-server-admin set-staff jsmith
anaconda-server-admin unset-staff jsmith
```

Change a user’s login name (username):

```
anaconda-server-admin move-user old_name new_name
```

NOTE: Replace “old_name” with the current username, and “new_name” with the new username.

Ensure the files recorded in the database exist.

    anaconda-server-admin verify-storage

Ensure that files recorded in the database exist and have the correct checksum:

```
anaconda-server-admin verify-storage --md5
```

List the key names of files with problems:

```
anaconda-server-admin verify-storage --list-files
```

Scan the storage for unused files and delete them:

```
anaconda-server-admin clean-storage
```

Update the bundled installers:

```
anaconda-server-admin update-installers
```

Delete a user:

```
anaconda-server-admin delete-user jsmith
```

Set or unset “read only” mode:

```
anaconda-server-admin read-only --enable/--disable
```

Convert a regular user account to an organization and add another user to the owners group:

```
anaconda-server-convert-account to-organization --owner some_user regular_user
```

Convert an organization into a regular user account:

```
anaconda-server-convert-account to-user some_organization
```

FAQs

What is Anaconda Enterprise 4 Repository?

Anaconda Enterprise 4 (AE4) Repository is package management server software that makes it easy to find, access, store and share public and private notebooks, projects, installers, environments, and conda and PyPI packages. AE4 Repository also makes it easy to stay current with updates made to the packages and environments you are using.

Many enterprises have customized local instances of AE4 Repository. Anaconda also makes an instance of AE4 Repository available for public use at anaconda.org.

What kind of packages does Anaconda Enterprise 4 Repository support?

Anaconda Enterprise 4 Repository supports any type of package. It is primarily used for conda, PyPI and R packages, as well as notebooks and environments.

What is Anaconda?

Anaconda is a software development and consulting company of passionate, open source advocates based in Austin, Texas, USA. We are committed to the open source community. We created the Anaconda Python distribution and contribute to many other open source-based data analytics tools. You can find out more about us by reading our story.

How do I get started with Anaconda Enterprise 4 Repository?

If you have access to Anaconda Enterprise 4 Repository, you can search, download and install hundreds of public packages without having an account.

If you want to upload packages to AE4 Repository, you need to sign up for an AE4 Repository account, get Anaconda and the Anaconda Client. For more information, see *Creating an account* or ask your system administrator.

What is an organization account, and how is it different from an individual account?

An organization account allows multiple individual users to administer packages and have more control over package access by other users. An individual account is for use by one person.

Who can upload packages to an organization?

Only users who are co-owners of an organization may upload packages to that organization. Administrators who are not co-owners cannot upload packages to the organization. Users who are members of groups with read/write access but who are not co-owners, cannot upload packages to the organization.

Help and support

Your organization receives Professional Support with your purchase of Anaconda Enerprise 4 Repository. Please contact your system administrator for help.

Joining the Anaconda Community

You are also welcome to join the Anaconda community. On these lists you can ask questions, answer questions, and discuss ways to use Anaconda. You can also submit requests for new features and make any other comments you may have.

Note that the community support forums cannot provide Anaconda Enterprise 4 Repository support.

Reporting a bug

Report any issues with Anaconda Enterprise 4 Repository or Notebooks to support.anaconda.com.

Release notes

The Anaconda Enterprise 4 Repository 2.33 release is available to all Anaconda Enterprise 4 Repository customers as of September 19, 2017.

NOTE: If you have a subscription but do not have a license, contact support to receive that license. Otherwise, contact sales to acquire it.

Administrators can update to the new Anaconda Enterprise 4 Repository release as described in *Updating Repository*.

Please contact your enterprise support representative if you have any questions or problems regarding the release.

SEE ALSO: *update instructions for current and past versions*.

2.33.24 - 2018-07-03

User facing changes

- Updated compatibility docs

Non visible changes

- Cloudflare cache invalidation
- Fixed pypi simple index mirroring
- Fixed installers and environments downloads on read-only mode
- Raise exception when an invalid USER_REGEX value is used
- Fixed “All labels” file filter
- Fix broken session

2.33.23 - 2018-05-23

User facing changes

- Policy change notice

2.33.22 - 2018-05-21

User facing changes

- Support for ppc64le installers
- Constructor form advanced option validation
- Added explicit Redhat versions to requirements
- Improved API docs regarding the basename of files
- Search includes package summaries
- Bug fixes and broken link fixes
- Added note about compatibility between LDAPS and START_TLS
- Fixed pypi mirror config example

2.33.21 - 2018-05-03

User facing changes

- Added advanced options on installer creation form
- Warn about label `main` when manually editing labels
- Package summary shows summary of latest `main` release

2.33.20 - 2018-04-24

Non visible changes

- Support for serving files from the origin

2.33.19 - 2018-04-19

User facing changes

- Flash warning when label doesn't exist
- Searching using unicode characters
- Notebooks without labels are rendered

Admin facing changes

- Added option to customize constructor temp dir
- Forbid supplying the same account as owner when converting account to org

Non visible changes

- Fix download stats link
- Avoid saving generated zip for installers
- Add quotes on paths in AIC templates
- Add support for unicode characters in version
- Removed server header from responses
- Fixed label validation

2.33.18 - 2018-04-03

User facing changes

- Added icons to the repo files page
- Changed package search placeholder
- Updated notebook upload icon
- Show warning when copying a label onto itself
- Fixed navbar spacing when logged out
- Fixed org feed links

Admin facing changes

- Reuse owners group when converting account to org

Non visible changes

- Fixed redirection after label operations
- Fixed transferring from org to superuser account
- Fixed update of installers and parcels
- Label filters are reset if the label set changes

2.33.17 - 2018-03-09

Non visible changes

- Next URL whitelist

2.33.16 - 2018-03-08

User facing changes

- Add warnings when removing main label
- Update last seen on account change
- Allow signing up with an orgs email
- Show favorites on dropdown menu for orgs
- Show settings tab for collaborators
- Fixed LDAP TLS docs

Admin facing changes

- Allow superusers to be organization admins
- Add billing history

Non visible changes

- Added validation of build number
- Add scheme to AIC templates
- Removed hotjar
- Remove marketo

2.33.15 - 2018-02-27

Non visible changes

- Standardize If-Modified-Since handling

2.33.14 - 2018-02-20

Non visible changes

- Fix HEAD support by stripping quotes from s3's object

2.33.13 - 2018-02-19

User facing changes

- Custom ordering of notebooks and environments
- Added tooltips showing the exact upload date and time of files on the repo page
- New command to convert regular user accounts to organizations and back
- Last upload date on package and installer info pages
- Fixed error message wording when deleting packages on groups
- Fixed error message when deleting packages, environments and notebooks
- Fixed the wording on the empty dashboard cards
- Fixed navbar fonts on IE11
- Fixed file management actions for package collaborators
- Fixed transferring of packages to and from the same user
- Show file actions for collaborating organizations
- Forbid downloads on read-only mode
- Allow collaborators with admin rights to delete ownables

Admin facing changes

- Mirror tools now create organization accounts by default

Non visible changes

- Add custom X-Anaconda-Lockdown and X-Anaconda-Read-Only response headers
- Use database info to construct filenames of conda downloads
- Fixed support for HEAD method on download endpoints
- Added extra validation of the basename on conda package uploads
- Use upserts instead of inserts to stage files

2.33.12 - 2018-02-07

User facing changes

- Updated terms of service

2.33.11 - 2018-02-06

User facing changes

- Added badge for the date of the latest release
- Added badge for platform support
- Show warning if no revision is selected when working with projects
- Updated terms of service
- Favorites are now shown on org dashboards

- A warning message is now shown when all packages are added to a given group

Admin facing changes

- Disable password reset admin option while using LDAP

Non visible changes

- Added proper HEAD support on download endpoints
- Disabled USE_SERVER_BASED_SESSIONS by default
- Disabled database based settings
- Strengthened validation of labels
- Fixed popups for operations when no files or packages are selected
- Fixed deletion of files by collaborators
- Fixed access to static content while on LOCK_DOWN
- Fixed transfer of ownership of items between orgs

2.33.10 - 2018-01-19

User facing changes

- Added "noarch" to the platforms mirrored by anaconda-server-sync-conda

2.33.9 - 2018-01-16

Admin facing changes

- Made fs_storage_root setting mandatory only for local filesystem storage

2.33.8 - 2018-01-15

User facing changes

- Updated LDAP docs
- Hide actions on a user's repo page when viewing it with an org

Admin facing changes

- Made fs_storage_root setting mandatory
- Block uploading a new license when read-only mode is enabled

Non visible changes

- Fixed exception logging on anaconda-server-sync-conda
- Remove debug code
- Better handling of next url redirect on login link
- Fixed response of repodata endpoint when an invalid If-Valid-Since header is given
- Remove install instructions from label table
- Fix orgs favorites

- Removed suggestions from confirmation dialogs

2.33.7 - 2017-12-11

User facing changes

- Updated support links
- Added activity feed item for installer upload
- Clarified pip install example command
- Added close icon for installer log popup
- Organizations are able to see their email on the profile page

Admin facing changes

- Removed READ_ONLY config option. Added admin cli tool to change read only state

Non visible changes

- Added index in database for package '_name' attribute
- Several fixes on license creation page
- Added proper message to groups permission set
- Fixed actors for some feed items actions
- Validate that users exists when adding a group member
- E-mail confirmation error message for organizations
- Enable read-only option with repo page
- Fixed profile description not being wrapped

2.33.6 - 2017-11-27

Added

- Filter for authenticated packages in search/favorites view
- Updated message for input field when copying label
- Updated support links
- Added email notification when group member is added
- Installation info for R and pypi packages using labels
- Support for defining standard labels
- Added support to remove user using anaconda-server-admin
- Show licence url for packages, environments and notebooks
- Validation for empty fields in credit card info for plan upgrade

Fixed

- Updated instructions to create initial user
- Prevent organizations to have admin access for ownables of its original user

- Fixed package view when a release description is not a string
- Panels for ownables not showing in profile page if there are no packages
- Set limit to installers log height to prevent modal going below the footer
- Validation to prevent organization adding itself to one of his groups
- Set invalid license messages on mirroring script to debug instead of warning
- Generated tokens can be viewed without password prompt if kerberos authentication is used
- Fixed link on R package label page
- Remove password reset option if auth_type is not native
- Replaced urls for R packages sources
- Fixed counts in billing overview page
- Added quotes to install instructions to avoid issues with spaces
- Documentation tooltip in conda packages
- Hide transfer modal if there are no accounts to transfer to
- Use dashboard used instead of current user as actor for feed items
- Fixed feed url links
- Redirection for labels on package files list
- Removed duplicated feed item on package transfer
- Fixed installer version validation message
- Fixed query to retrieve non-private packages
- Fixed dead links to deleted projects on the feed
- Expanded LDAP groups docs
- Handling of duplicate package exceptions on API
- Remove word kapsel from email when collaborator is added

2.33.5 - 2017-11-07

Added

- Added a CLI tool to manage group membership
- Missing tooltips on header and admin section
- Added some missing feed items
- Account search now uses both names and emails
- Filter for authenticated packages

Fixed

- File info modal now works with list attributes that contain dicts
- Validate uploaded environment name
- Improved UX of installer creation form
- Updated feed icon for group collaboration removal

- Show all feed items related to a particular ownable in the History tab for that ownable
- Added main channel to default mirror config
- Generic exceptions during LDAP auth are now caught and logged
- Fixed supervisord script crontab option
- Updated read only rules on projects and installers
- Disable autocomplete suggestions for confirmation input fields
- Added authenticated packages to the billing package limit notice
- Add quotes around conda install help message if label has spaces
- Specify correct package type on tooltip text for label removal
- Updated flask-login-ldap dependency
- Validate name of copied label
- Removed validation of label name on deletion
- Removed duplicate HTTP headers on cached responses
- Do not allow pypi packages in installers
- Updated mirroring docs
- Make installers/projects summary optional
- Replaced some occurrences of word kapsel
- Align upvote icon
- Set package access from packages list
- Only owners can upload installers/environments to its own channel

2.33.4 - 2017-10-24

Added

- Use environment variable to set initial user's password
- Usernames blacklist
- Show projects and installers summaries on header
- Added tooltips to package page buttons
- Instructions to generate tokens for organizations
- Feed items for projects and installers
- Settings for session timeout
- Supervisor script creates folder for extra config
- Updated EULA
- Set private packages and storage to unlimited individually
- Added progress indicator on installer upload
- Command to mirror only latest versions of conda packages

Fixed

- Fixed creation of private packages from the API
- Feed now uses the package database when it doesn't know the package type
- Hidden installers empty panel on profile page
- Infer access attribute from other attributes when adding package
- Incorrect logging of user downloads
- Show 'Set access' options for organizations in packages list
- Flash error messages when an errors occur on LDAP admin page
- Replaced word kapsel with project on flash messages
- Changed s3 content-disposition of anaconda server installers
- Date ranges for stats in admin page
- Transfer projects with the same name as a deleted project
- Remove package groups when package is archived
- No longer is possible to upload expired licenses
- Hide brand from delete user modal if user is an organization
- Package and environment file modal style issue
- Filter public packages from package search in admin
- Allow access to ownable settings to collaborators with 'write' permissions
- Fixed pypi installer tooltip
- In admin user account, prevent setting lower storage than the used storage
- Delete groups when the org is removed
- Removed add-ons page
- Handling missing package after deleting files
- Do not allow to create tokens expiring today
- Fixed redirections to packages on feed items
- Show installer and project feed items in history tab
- Show all collaborators of an organization's package
- Fix issues with package icons on dashboard
- Sorted tabs in group settings
- Always display collaborators tab as 'Collaborators'

2.33.3 - 2017-10-20

Added

- Added support for server based sessions

2.33.2 - 2017-10-10

Fixed

- Exception in admin after updating private packages for a user

2.33.1 - 2017-10-03

Added

- New feed items for group membership and groups collaborations
- Download stats for files API endpoint
- Option to set amount of private packages for a user from admin
- Improved license creation page
- Added distribution_types to downloads feed
- Set packages access as authenticated from packages list
- Added option –authenticated to anaconda-server-sync-conda
- Added conda-build as dependency
- Relaxed expired tokens restrictions for public endpoints
- Add organizations as collaborators for packages, environments and notebooks
- Send email when adding collaborator to a project/installer

Fixed

- Link to docs in packages view
- Catch all exceptions raised when loading environment file
- Return json responses on api calls when an error is encountered
- Error message when uploading an invalid installer file
- Group permissions moved to the settings
- Fix wrong autocomplete using firefox
- Fix typeahead initial suggestions in installers form
- Updated callout in contact us form
- Hiding package access settings for collaborators
- Fixed refresh when closing user menu on the navbar
- Show info about installers downloads on admin interface
- Fixed downloads stats on admin
- Prevent adding package owner as package collaborator

- Storing package_type when API package upload
- Collaborators can now access a package's history page
- API docs are back up again
- Refactored mirroring tools
- Fixed incorrect links from feed items

2.33.0 - 2017-09-19

Added

- SUPERUSER_SEARCH to set superuser status in LDAP
- File format validation on installer upload
- Show which users are admin in users list
- Use similar settings for typeahead package suggestions
- Require user to be logged in to see user typeahead suggestions
- Cleaned output from test suite
- READ_ONLY mode setting and admin option
- Added tooltips to social media icons on footer
- Hide license download buttons from add-ons page
- PAM authentication support
- Added reCAPTCHA to contact us form

Fixed

- Exception in group collaborations list for a package after group delete
- Maintain consistency in redirections after item deletion
- Fix group link in project collaborator view
- Flash message after issues with email validation
- Exception on admin downloads list for a user when package/file was had no owner
- Change dashboard user on item transfer
- Prevent adding current user as a collaborator
- Remove current owner from items ownership transfer options
- Fixed UI issues
- Validate name and version of installers only when full form is submitted
- Fixed some redirections to documentation in Anaconda Cloud
- Hiding delete package for collaborators
- Updated links to slideshare and youtube accounts

2.32.9 - 2017-09-15

Fixed

- Fixed forgot password link

2.32.8 - 2017-09-11

Fixed

- Temporarily disabled contact page for anaconda cloud

2.32.7 - 2017-09-07

Fixed

- Exception in token expiration warning code
- Fixed error when displaying a group that no longer exists

2.32.6 - 2017-09-06

Added

- Separated package groups collaborations in three tabs (packages, notebooks, environments)
- Added icons to all feed items
- Provided more info on feed for uploaded packages/environments/notebooks
- Unicode validation on signup form
- Package api returns builds and adds filter for search platform
- Validation for profile name
- Added option to upload all packages to a group at once
- Added page to see feed for a user
- Added some reserved names for packages
- Semantic versions validation for installers version field
- Warning header when token is about to expire
- Make favorites page public

Fixed

- Allowing anaconda login under lockdown
- Fixed potential exceptions on old cache code
- Changed typeahead environment query to use dashboard user
- Fixed issues with the upload of previously deleted installers
- Fixed Cache-Control headers on old repodata caching code
- Display all packages by default, not just only conda packages
- Show correct label for Groups & Collaborators depending on type of user

- Changed owner of uploaded installer to current dashboard user
- Remove groups permissions from all items after group delete
- Color schemes of some flashing messages
- Prevent project/installer transfer if recipient already has one with the same name
- Empty environment field from installer created from environment if the environment was deleted
- Fixed email validation when other user is logged in
- Maintain consistency on headers from dashboard
- Fixed token generalizations
- Exception on admin downloads list for a user when package/file was missing
- Fixed “View Docs” URL
- Use dashboard user in redirects after file delete

2.32.5 - 2017-08-29

Fixed

- Removed Continuum references

2.32.4 - 2017-08-28

Fixed

- Fixed old continuum links

2.32.3 - 2017-08-24

Fixed

- Navbar logo responsiveness issues

2.32.2 - 2017-08-24

Fixed

- Changed navbar buttons order to the new design schema

2.32.1 - 2017-08-24

Fixed

- Bigger logo on the navbar
- Fixed home page screenshot of the site

2.32.0 - 2017-08-22

Added

- New top bar button structure
- Added option 'any' to display all kind of packages in repo view
- Support for custom user avatar methods
- Updated *cas-mirror* docs
- Create installers uploading an environment file
- Parcel and management packs can be created from installers previously created
- SSL protocol version can now be customized
- Fresh design
- Stats API endpoint
- Updated all flash messages colors

Fixed

- Ownership of uploaded environments
- Doc links on the feed
- Styling of installer widget
- Transferred projects now appear in dashboard
- Environment validation
- Environment upload labels
- Show correct package type when transferring package/environment/notebook
- Increased panel sizes in profile and dashboard
- Limited items to display in panels
- Fixed collaborators view
- Potential cache related exception
- Made management packs template order deterministic
- Unsafe redirections
- Removed packages from groups when transferred
- Closed XSS vulnerabilities
- Contact us emails are sent from contact@anaconda.org with a reply-to header
- Fixed typeahead input field to add package collaborators
- Archive items when all their files are deleted
- Return NotFound on item details page when they don't contain any files
- Fixed stats report admin view
- Replaced occurrences of the word "package" for a more appropriate name depending on the package type

2.31.6 - 2017-08-08

Added

- Email notification when added as a collaborator
- Labels regex now distinguishes uppercase characters
- Added site export tool
- Upload option for installers
- Added button to review the build log next to each installer file
- Version specific landing page for packages
- Added group info to site export tool
- Upload option for environments

Fixed

- Layout issues on dashboard and repo pages
- Remove user from groups when the account is removed
- Remove user as a collaborator for installers/packages/projects/notebooks/environments when is deleted
- Show only projects with files in projects list
- CSV export of users
- Typeahead for multi-type packages
- Added user validation to remove collaborator form
- Metadata display on package API
- Cache key generation and diskcache size limit parameter
- Empty packages will no longer appear in search results

2.31.4 - 2017-08-03

Fixed

- Fixed repodata caching

2.31.3 - 2017-07-27

Fixed

- Fixed label validation

2.31.2 - 2017-07-24

Added

- Tool to check a file's checksum

Fixed

- Show conda packages install instructions only for available labels
- Solved exception raise by anaconda-server-admin clean-storage
- Hide empty packages/environments/notebooks from dashboard/profile page
- Solved exception raised creating an installer from an empty environment
- Fixed style issues with dashboard/profile page.
- Added help info in profile page
- Show correct icons in objects page
- Removed extra space from groups breadcrumb
- Fixed license not updating
- Hide License expired message overlay during session when alert is closed
- Fixed email sending on forgot password and forgot username

2.31.1 - 2017-07-13

Added

- Docs for LDAP timeout
- –clean-platforms option for anaconda-server-sync-conda
- Docs for backup and restore procedures based on the default installation
- Added setting for custom installers location
- Updated FontAwesome to 4.7.0

Fixed

- Displays the latest release data on the package page
- Fixed panel size in profile page and added scrollbars on overflow
- Show latest version available for each platform in conda packages
- Custom installers pre-configured to point to repo instance
- Exception when trying to display security log
- Display the correct username on the navigation bar
- Remove unused logging configuration

- Python tags on environment.yaml now parsed on installer creation from environment
- Omitting non-conda dependencies on installer creation from environment
- Updated documentation links
- Added missing R packages icons
- Unicode issue on Contact Us form for anaconda cloud
- Fixed CSS issue on Internet Explorer
- Solved issues with labels containing slashes and spaces
- Updated link to conda documentation
- Force pypi mirroring for a new mirror user
- Fixed validation when setting packages to private in bulk
- Fixed some UI issues with long names
- Fixed org creation on mirroring tools
- Labels link takes you to all type package listing
- Package type filter set to 'all' will not show notebooks/environments anymore
- Confirmation of package delete with username input works also using uppercase
- Correct order of search filters
- Fixed typeahead endpoints
- Fixed duplicated channels on custom installers
- Allowing slashes on token name delete action
- Disabled LDAP referrals by default

2.31.0 - 2017-06-28

Added

- Added USER_REGEX defaults to reference docs
- Added period (.) as a valid character for the default USER_REGEX
- Added diskcache based repodata caching
- Added license url validation for packages
- Option to set storage keyname to full path
- Show error message when attempting to add duplicated collaborators

Fixed

- CSS fixes on top navbar
- CSS fixes on group names
- Added filter for valid packages in installer creation
- Added support for deleted Strip accounts
- Stops adding/updating labels if the validation fails
- Tokens modal is no longer going below the bottom of the page
- Displaying credit card errors correctly
- Handling LDAP login error
- Fixed highlight of project settings tab
- Updated tqdm version to stop exception on mirror download
- Environments summary is no longer duplicated
- Display correct package summary after update
- Customized success message on upvote depending on package type
- Updated links to docs for labels
- Updated verbose exception
- Fixed notebook revisions links
- Optimized query to get latest package versions
- Updated all references to docs with correct links for cloud
- Removed top-level domain validation from profile URL
- Improved speed of show_channel endpoint
- Added validation to prevent duplicated packages on installers
- Changed default label filter for packages to 'all'
- Removed distinction of user menu based on username
- CSS issues with long names
- Fixed long project names overlapping

2.30.3 - 2017-06-06

Added

- Added feeds for kapsel creation/removal/new revision

Fixed

- Added some more plural forms for flash messages
- Show project description from latest revision instead of project summary
- Fixed window installer configuration files
- Moved project history to settings
- Projects and installers on the same row
- Fixed installer creation under LOCK_DOWN
- Fixed settings tab highlight on installer admin page
- Fixed handling of empty page param on search page
- Fixed max-age overflow on authentications endpoint
- Fixed project creation time
- Fixed installer form when python package has no releases
- Fixed subscriptions plans link
- Fixed unicode issues on contact form
- Merged LDAP login logic
- CSS clean up for groups with long names

2.30.2 - 2017-05-24

- Fixed authentications endpoint

2.30.1 - 2017-05-24

Added

- Warning before deleting a package and all of its messages
- Tool to check orphan files and packages
- Added option to lock down all public pages
- Added link to contact us for custom plans.

Fixed

- Display error message when config file is not found
- Fixes resend confirmation email
- Retrying on 502 error while mirroring conda
- Replace non-ascii characters from filename when downloading a file
- Added password validation to password reset form
- Handling 404 on s3 key_exists
- Removed files and packages will appear on package history
- Using user's name and email on contact emails

- Changed Resend Email label to Password Reset in admin page
- Added placeholder to collaborators form
- Added singular form messages in flash notifications
- Fixed popup label for pkg/nbk/env settings
- Fixed scrollbar blocking content in installers documentation
- Added searchbox on navigation header for non-authenticated users
- Added more database indexes for better query performance
- Removed admin monitor page
- Increased request timeout default to 120 seconds
- Updated the mirror configuration examples
- Fixed URL for pricing info
- Fixed token creation API
- Removed outdated mirror documentation
- Added migration to normalize files data
- Added brand as key in api endpoint
- Declined credit card info is no longer stored
- Improved UI for group members page

2.30.0 - 2017-05-08

Added

- Added EULA to the installer
- Contact Us form now sends emails to support@anaconda.org
- Create organization instead of user on mirroring tools

Fixed

- Fixed anaconda-server-sync-conda settings message
- Secured web helpers views
- Removed unused test endpoints
- Fixed insecure groups endpoint
- Fixed filename too long exception on type filter for installers
- Server side encryption on S3 storage
- Fixed documentation link in /settings/access API token page
- Year in footer matches current year
- Fixed password restrictions checks
- Replaced binstar-* message for anaconda-server-* on mirroring script
- Added missing instruction to Project upload instructions
- Fixed the way we load the license data from the database

- Added validation for reserved usernames
- Fixed package set-access on firefox
- Fixed encoding error on package information page
- Changed error message on installer creation form

2.29.1 - 2017-04-19

Fixed

- Fixed access to LDAP views
- Removed unused remove_user view
- Add support for expired marketo access token
- Fixed exception on installer creation

2.29.0 - 2017-04-19

Added

- Visibility on Projects feature
- Sortable account list by package count
- Change plan button for organizations
- Add lead source to marketo requests

Fixed

- Fixed installers downloads
- Set S3 addressing style to “virtual”
- Fixed S3 ETag processing
- Fixed handling of missing arch attribute on search
- Typeahead endpoint access limits
- Changed supervisord runtime files location
- Allowing numeric named installers
- Allows installer creation with environment with url on the channel list
- Fixed typeahead on installer creation form
- Remove unreachable code
- Fixed flake8 findings
- Fixed installer collaborators form
- Fixed remove unlabeled files
- Fixed repo access admin for organizations

2.28.1 - 2017-04-03

Added

- Installers can now be created from uploaded environments

Fixed

- Fixed outdated version badges
- Add “jessie” and “sles12” parcel suffixes
- Only allows alphanumeric characters on installers name
- Fix group installers page
- Fix edition of existing installers

2.28 - 2017-03-22

Added

- Add UI to delete and set access of packages on the repo page
- Add UI to delete files in the files section of the repo page
- Add UI to set and unset superuser and staff status on admin page
- Staff users can now access licensing
- Pagination on history for the account admin page

Fixed

- Config set using *anaconda-server-config*
- Username on page titles
- Fixed anaconda-server-sync-conda issue with local repos
- CSV export on emails with special characters
- Package label filtering
- Signup password validation error message
- Exception requesting non existing file url
- Fixed email confirmation for organizations
- Text overflow when username is too long
- Remove all user packages in a single action to avoid filling the queue
- Checking user existence on reset password
- Installer URL shows zip extension

2.27.5 - 2017-03-14

Fixed

- Added boto dependency back

2.27.4 - 2017-03-03

Added

- Support for S3 regions that only use V4 signatures
- Support for S3 server-side encryption
- Support for custom PyPI repo sync
- New releases overrides package's description, summary, license and icon
- Update mongodb to 3.4

Fixed

- API endpoint *DELETE /dist/{owner_login}/{package_name}/{version}/-/{_id}* should delete the file with the associated ID
- Email validation on profile page
- Downloading files with spaces or special characters should result in the correct filename
- Some documentation URLs showed up without styling
- Fixed text overlap in admin deployment page
- */downloads* installers should generate configuration files correctly
- "Not Found" errors are more consistent and clear
- Package search timeout
- Displaying validation in the popup on account's admin page

2.27.3 - 2017-03-02

Fixed

- Add support for string license attribute

2.27.2 - 2017-02-27

Fixed

- Remove pyc from ambari mpack templates folder

2.27.1 - 2017-02-23

Added

- Limit to the cache

Fixed

- Added missing ambari mpack templates folder

2.27.0 - 2017-02-15

Added

- Support for generating custom Hortonworks/Ambari management packs
- License and license url to packages api
- Update email confirmation code to more secure and flexible hash
- Support for multiple users with same email (if option enabled)
- Admin support to remove an account
- Admin support to change storage size or change plan to free unlimited
- Package versions on installers and parcels are now optional
- Specify a configuration file with the environment variable ANACONDA_SERVER_CONFIG

Fixed

- Noarch repodata should not include files that are missing platform and arch
- Fix attribute errors kapsel unit tests
- Mirror configuration *python_versions* should not require quotes
- Add link to package on Favorites page breadcrumbs.
- Improve support for POWER and ARM architectures.
- Provide a useful error page when MongoDB is unreachable.
- Fix notebook and env with same name
- Suppress form errors when adding or removing package/channels
- anaconda-server-config will work on the config file you actually have
- Remove temporary redirects on user settings and org groups settings
- Disable empty as a valid label/channel name
- Fix organization name on group membership view
- Disable Reset Password if it is the only button

2.26.5 - 2017-01-30

- Remove experimental feature from display.

2.26.4 - 2017-01-30

Fixed

- Some files would not be cleaned up correctly when the corresponding user was deleted in the interface. Added a migration to clean up any existing unused files.
- Add *anaconda-server-admin clean-storage* command to clean up unused files.
- Fix csv column order on package info at the admin page.
- Render URLs in the package summary as links.
- Display correct breadcrumb for a selected environment.
- Sort labels on package page alphabetically.
- Pluralize storage information correctly.

2.26.3 - 2017-01-10

- Added AnacondaCON promo to Anaconda Cloud

2.26.2 - 2017-01-06

Added

- Conda repodata is now cached more frequently.
- Constructor installer creation will now be terminated if it takes longer than 60 seconds.

Fixed

- An error that occurred when PyPI packages that were deleted were re-uploaded.

Anaconda repository 2.26.0 - 2016-12-19

- Anaconda Repository has a new mirroring tool with reproducible results, and improved support for delta mirroring.

Anaconda repository 2.25.0 - 2016-11-30

- Anaconda Repository is now distributed as a self-contained installer.

Anaconda repository 2.24.4 - 2016-11-17

- FIX: issues with async workers PR #3120, #3123
- FIX: Issue with sending forgotten username. PR #3120
- LOGGING: log everything to stdout. supervisord script will now log to file instead of syslog PR #3106
- KAPSEL: Remove kapsel uploader PR #3107

Anaconda repository 2.24.0 - 2016-11-09

- Documentation updates
- Fix task queue (removed mtq library)
- Improve performance of PyPI simple index page
- Move licensing code to anaconda_platform.component.licensing
- Add hotjar (cloud)
- Move username regex to check into settings
- Parcels: Add anaconda and python 2.7 as default packages
- Added AIC (Anaconda Installer Configuration) installers
- Remove Kapsel Execution

Anaconda repository 2.23.1 - 2016-10-25

Added

- Gevent in as the server worker_class
- Remove check of key existence in s3 for anaconda.org

Anaconda repository 2.22.0 - 2016-10-18

Fixed

- API: added correct handling when user is deleted
- DOWNLOADS: allow unlimited storage of download stats
- UI: terms and conditions link was incorrectly escaped
- NOTEBOOKS: fix sorting of notebook versions
- REPO: copied package files would sometimes return 404
- UI: added default sorting to more tables
- REPO: usability and functionality fixes for CDH parcel generation

Anaconda repository 2.21.0 - 2016-09-29

Added

- REPO: users can *create custom CDH parcels through Anaconda Repository*
- UI: standardize sorting on tables
- UI: the software version is included in the footer of Anaconda Repository

Fixed

- NOTEBOOKS: added iframe sandboxing to notebooks
- NOTEBOOKS: fixed rendering of thumbnails uploaded by *nb_anacondacloud*
- REPO: copied package files were sometimes incorrectly garbage collected

Changed

- UI: The pages on the *conda.anaconda.org* and *pypi.anaconda.org* domains redirect to *anaconda.org*.

Removed

- BUILD: The deprecated build feature has been removed from Anaconda Repository.

Anaconda repository 2.20.4 - 2016-09-26

Fixed

- NOTEBOOKS: links in the notebook will open in the browser window directly, instead of inside of a frame.

Anaconda repository 2.20.3 - 2016-09-20

Fixed

- Allow numeric usernames

Anaconda repository 2.20.2 - 2016-08-18

Added

- REPO: package types will correctly update from added files (#2492)
- UI: cluster pages now list apps associated with that cluster
- Notebooks larger than 25mb will not be rendered (#2336)
- API: the endpoint `/user/{account}/downloads/{start}--{end}` now provides download activity aggregated by package for an account.

Fixed

- Improve the performance of the security feed (#2335)

Changed

- UI: the reminder to use beta will be hidden for 24 hours when a user clicks the "close" button.
- BUILD: remove welcome to build message for build deprecation notice.
- UI: rename project to kapsel everywhere (except imports) (#2563)

- Collaborators page updated to new groups API (#2512)

Anaconda repository 2.19.5 - 2016-08-04

Fixed

- Fixed generation of URLs to user notebook content server over https

Anaconda repository 2.19.4 - 2016-07-21

Fixed

- DB: improved group migration to handle more corner cases

Anaconda repository 2.19.2 - 2016-07-07

Fixed

- REPO: package types will correctly update from added files (#2492)

Anaconda repository 2.19.1 - 2016-07-07

Added

- Basic Cluster Pages
- Conda Caching - Conda endpoints now use Last-Modified/if-modified-since headers

Anaconda repository 2.18.0 - 2016-06-01

Added

- API: add an endpoint `/user/{account}/downloads/{start}--{end}` that provides an aggregated summary of download activity for an account.
- BUILD: automatically scroll to the bottom of log when new lines are appended
- REPO: improve support for R packages
- WEB: license warning message includes a link to the license configuration page

Fixed

- Users do not need to be logged into GitHub to trigger builds
- BUILD: remote address for workers will be detected correctly when running behind a proxy (#2036)
- API: LDAP users logging in for the first time via *anaconda login* are created correctly.
- PIP v8.1.2 fixed package name lookup

Anaconda repository 2.17.0 - 2016-04-18

Added

- Queue administration page that displays build worker details and history (#1847)
- An additional configuration file can be specified with the environment variable `ANACONDA_SERVER_CONFIG` or the command line argument `--config-file`
- Configuration files in the directory `$PREFIX/etc/anaconda-server/` will now be automatically loaded
- Better logging for login logic
- Failed logins are now recorded in the security log
- `docs.anaconda.org` content is now bundled with Anaconda Repository
- New privacy policy
- Project's API
- Show notebooks with nbpresent metadata as presentations (#1583)
- Can now view different versions of notebooks (#1764)
- Complete list of current settings on /admin/deployment (#1928)
- Decorator to validate params in a requests. (#1970)
- `api.anaconda.org` returns `conda_url`, `pypi_url` and `main_url` (#1984)
- `keyname` is displayed for superusers on the file details modal, allowing an administrator to locate a file on disk (#1985)

Fixed

- Editing package description should not add extra whitespace (#1710)
- Starred packages owned by other users will appear on the dashboard (#1706)
- Notebook output that is too wide will display a scroll-bar (#1581)
- Cleaned up styling on CI settings page (#1713)
- Security log details modal should appear for non-administrator users
- More graceful handling of notebook rendering failure (#1548)
- GitHub OAuth flow in the user settings page (#1931)
- Changed conda install instructions to use short channel name
- Group API exceptions when viewing group members (#1959)
- Fixed error in sample enterprise config file (#1968)

Changed

- Renamed "upvotes" to "favorites" (#1707)
- adjusted helptext for conda install from specific user channel (#1914)

Anaconda repository 2.16.6 - 2016-03-28

- Clean up build workers that have been idle too long (#1749)
- Add SMTP support for sending email (#1747)
- Add remote address of build workers to queue status (#1743)
- Toggleable sections in build log output
- Render progress bars in build log correctly
- Fix organization page redirects
- Improve search performance for “type:pypi” query (#1808)
- Fix duplicated build item when resubmitting via CLI (#1805)
- Fix sorting of file sizes (#1783)
- Fix small issue in package files page

Anaconda repository 2.16.0 - 2016-02-25

- Kerberos Authentication Support
- Several small fixes
- Performance improvements

Anaconda repository 2.15.5 - 2016-02-06

- Minor fixes and improvements
- Made build a separate component from the server
- Added license code
- Improved UI
- Better support for labels
- Improved performance on user profiles / security pages

Anaconda repository 2.14.1 - 2016-01-20

- Re-enabled the anaconda copy command
- Release renaming “channels” to “labels”
- Implemented new UI enhancements that included a new user dashboard
- Performed additional bug fixes

Anaconda repository 2.13.1 - 2016-01-12

- Implemented “My upvotes” page
- Added UI improvements to notebooks
- Implemented error logging fixes
- Performed additional bug fixes

Anaconda repository 2.12.3 - 2015-12-22

- Implemented UI Improvements to align with Anaconda branding, making A-Cloud easier to use
- Added confirmation after sending a message to support from the “contact us” page
- Removed left nav on dashboard
- Moved channel manager to the apps dropdown
- Made it easier for Academic users to access features by adding extended subdomain access for institutions
- Created a landing page for bug reporting to help A-Cloud users better self-select which repo for issue logging

Anaconda repository 2.11 - 2015-12-09

- Implemented UI Improvements
- Fixed minor issues
- Improved user profile
- Improved password validation
- Updated plans and pricing pages

Anaconda repository 2.10 - 2015-11-13

- Implemented UI Improvements

Anaconda repository 2.9 - 2015-09-28

- Implemented Upgrade/Setup script
- Offered free MKL Optimizations and free IOPro Addons for academic use
- Added command line scripts for user name changes
- Allowed port number configuration
- The Anaconda Server will subsequently be referred to as Anaconda repository

Anaconda Server 2.8 - 2015-08-27

- Added support for Jupyter 4.0
- Made passwords configurable
- Supplied better error messages

Anaconda Server 2.7 - 2015-07-28

- Implemented a new environment page
- Offered new channel features

Anaconda Server 2.6 - 2015-07-23

- Added support for conda noarch packages.
- Exposed additional distribution attributes via the API
- Changed Anaconda Server's underlying webserver from tornado to gunicorn

Anaconda Server 2.3 - 2015-04-24

- Increased specificity when mirroring the Anaconda repository including more robust license-blacklisting capacity and new python version-filtering capacity
- Implemented the ability to upload iPython notebooks to your Anaconda Server user account

Anaconda Server 2.2 - 2015-04-17

- Improved the user interface for channel-based interactions, which allowed users to manage multiple package and channel interactions from a single dashboard
- Performed additional unit testing
- **Due to a lack of backwards compatibility, this release locks the following two versions of the dependency packages:**
  - flask-wtf=0.8.4
  - werkzeug=0.9.6

Command reference

Anaconda Client is the command line interface (CLI) to Anaconda Enterprise 4 Repository. You can use it to log in, log out, manage your account, upload files, generate access tokens, view tokens and other tasks.

The full Client command reference is shown below. You can also view this command reference in a terminal window with the command `anaconda --help` or `anaconda -h`.

anaconda

```
usage: anaconda [-h] [--disable-ssl-warnings] [--show-traceback] [-v] [-q]
                [-V] [-t TOKEN] [-s SITE]
                ...

Anaconda Repository command line manager

optional arguments:
  -h, --help            show this help message and exit
  -V, --version         show program's version number and exit

output:
  --disable-ssl-warnings
                        Disable SSL warnings (default: False)
  --show-traceback      Show the full traceback for chalmers user errors
                        (default: False)
  -v, --verbose         print debug information to the console
  -q, --quiet           Only show warnings or errors the console

anaconda-client options:
  -t TOKEN, --token TOKEN
                        Authentication token to use. May be a token or a path
                        to a file containing a token
  -s SITE, --site SITE  select the anaconda-client site to use

Commands:

    auth                Manage Authorization Tokens
    label               Manage your Anaconda Repository labels
    channel             [DEPRECATED in favor of label] Manage your Anaconda
                        Repository channels
    config              Anaconda client configuration
    copy                Copy packages from one account to another
    download            Download notebooks from Anaconda Repository
    groups              Manage Groups
    login               Authenticate a user
    logout              Log out from Anaconda Repository
    notebook            [DEPRECATED in favor of upload/download] Interact
                        with notebooks in anaconda.org
    package             Package utils
    remove              Remove an object from Anaconda Repository. Must refer to
                        the formal package name as it appears in the URL of
                        the package. Also use anaconda show <USERNAME> to see
                        list of package names. Example: anaconda remove
                        continuumio/empty-example-notebook
    search              Search Anaconda Repository
    show                Show information about an object
    upload              Upload packages to Anaconda Repository
    whoami              Print the information of the current user
    build               Anaconda build client for continuous integration,
                        testing and building packages
    worker              Anaconda build client for continuous integration,
```

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```
                        testing and building packages
```

Authentication

auth

```
usage: anaconda auth [-h] [-n NAME] [-o ORGANIZATION]
                     [--strength {strong,weak}] [--strong] [-w] [--url URL]
                     [--max-age MAX_AGE] [-s SCOPES] [--out OUT]
                     (-x | -l | -r NAME [NAME ...] | -c | -i)

Manage Authorization Tokens

optional arguments:
  -h, --help            show this help message and exit
  -n NAME, --name NAME  A unique name so you can identify this token later.
                        View your tokens at anaconda.org/settings/access
  -o ORGANIZATION, --org ORGANIZATION, --organization ORGANIZATION
                        Set the token owner (must be an organization)

token creation arguments:
  These arguments are only valid with the `--create` action

  --strength {strong,weak}
  --strong              Create a longer token (default)
  -w, --weak            Create a shorter token
  --url URL             The url of the application that will use this token
  --max-age MAX_AGE     The maximum age in seconds that this token will be
                        valid for
  -s SCOPES, --scopes SCOPES
                        Scopes for token. For example if you want to limit
                        this token to conda downloads only you would use
                        --scopes "repo conda:download"
  --out OUT

actions:
  -x, --list-scopes     list all authentication scopes
  -l, --list            list all user authentication tokens
  -r NAME [NAME ...], --remove NAME [NAME ...]
                        remove authentication tokens
  -c, --create          Create an authentication token
  -i, --info, --current-info
                        Show information about the current authentication
                        token

Manage Authentication tokens
```

For more information, see the *Token* glossary entry.

login

```
usage: anaconda login [-h] [--hostname HOSTNAME] [--username LOGIN_USERNAME]
                      [--password LOGIN_PASSWORD]

Authenticate a user

optional arguments:
  -h, --help            show this help message and exit
  --hostname HOSTNAME   Specify the host name of this login, this should be
                        unique (default: hq-phone-114.corp.continuum.io)
  --username LOGIN_USERNAME
                        Specify your username. If this is not given, you will
                        be prompted
  --password LOGIN_PASSWORD
                        Specify your password. If this is not given, you will
                        be prompted
```

logout

```
usage: anaconda logout [-h]

Log out from Anaconda Repository

optional arguments:
  -h, --help  show this help message and exit
```

whoami

```
usage: anaconda whoami [-h]

Print the information of the current user

optional arguments:
  -h, --help  show this help message and exit
```

Informational

show

```
usage: anaconda show [-h] spec

Show information about an object

positional arguments:
  spec        Package written as USER[/PACKAGE[/VERSION[/FILE]]]
```

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```
optional arguments:
  -h, --help  show this help message and exit

Show information about an object
```

EXAMPLE:

```
anaconda show anaconda
anaconda show anaconda/python
anaconda show anaconda/python/2.7.5
anaconda show anaconda/python/2.7.5/linux-64/python-2.7.5-0.tar.bz2
```

search

```
usage: anaconda search [-h] [-t {conda,pypi}]
                       [-p {osx-32,osx-64,win-32,win-64,linux-32,linux-64,linux-armv6l,
↪linux-armv7l,linux-ppc64le,noarch}]
                       name

Search Anaconda Repository

positional arguments:
  name                  Search string

optional arguments:
  -h, --help            show this help message and exit
  -t {conda,pypi}, --package-type {conda,pypi}
                        only search for packages of this type
  -p {osx-32,osx-64,win-32,win-64,linux-32,linux-64,linux-armv6l,linux-armv7l,linux-
↪ppc64le,noarch}, --platform {osx-32,osx-64,win-32,win-64,linux-32,linux-64,linux-
↪armv6l,linux-armv7l,linux-ppc64le,noarch}
                        only search for packages of the chosen platform

Search Anaconda Repository for packages
```

config

```
usage: anaconda config [-h] [--type TYPE] [--set name value] [--get name]
                       [--remove REMOVE] [--show] [-f] [--show-sources] [-u]
                       [-s]

Anaconda client configuration

optional arguments:
  -h, --help            show this help message and exit
  --type TYPE           The type of the values in the set commands

actions:
  --set name value      sets a new variable: name value
```

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```
  --get name            get value: name
  --remove REMOVE       removes a variable
  --show                show all variables
  -f, --files           show the config file names
  --show-sources        Display all identified config sources

location:
  -u, --user            set a variable for this user
  -s, --system, --site  set a variable for all users on this machine

anaconda-client configuration

Get, Set, Remove or Show the anaconda-client configuration.

###### anaconda-client sites

anaconda-client sites are a mechanism to allow users to quickly switch
between Anaconda Repository instances. This can be used with the on-site Anaconda
Enterprise.

  * Invoke the anaconda command with the `-s/--site` option like this:

        anaconda -s site_name whoami

  * Set a site as the default:

        anaconda config --set default_site site_name
        anaconda whoami

###### Add an anaconda-client site

After installing Anaconda Enterprise
you can add a site named **site_name** like this:

    anaconda config --set sites.site_name.url "http://<anaconda-enterprise-ip>:<port>/api
↪"
    anaconda config --set default_site site_name

###### Site Options VS Global Options

All options can be set as global options that affect all sites
or site options that affect only one site.

By default, options are set globally:

    anaconda config --set OPTION VALUE

If you want the option to be limited to a single site,
prefix the option with `sites.site_name`:

    anaconda config --set sites.site_name.OPTION VALUE
```

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```
###### Common anaconda-client configuration options

  * `url`: Set the anaconda api url (default: https://api.anaconda.org)
  * `ssl_verify`: Perform ssl validation on the https requests.
    ssl_verify may be `True`, `False` or a path to a root CA pem file.

###### Toggle auto_register when doing anaconda upload

The default is yes, automatically create a new package when uploading.
If no, then an upload will fail if the package name does not already exist on the server.

    anaconda config --set auto_register yes|no
```

Package management

package

```
usage: anaconda package [-h]
                        (--add-collaborator user | --list-collaborators | --create)
                        [--summary SUMMARY] [--license LICENSE]
                        [--license-url LICENSE_URL] [--personal | --private]
                        USER/PACKAGE

Anaconda Repository package utilities

positional arguments:
  USER/PACKAGE          Package to operate on

optional arguments:
  -h, --help            show this help message and exit

actions:
  --add-collaborator user
                        username of the collaborator you want to add
  --list-collaborators  list all of the collaborators in a package
  --create              Create a package

metadata arguments:
  --summary SUMMARY     Set the package short summary
  --license LICENSE     Set the package license
  --license-url LICENSE_URL
                        Set the package license url

privacy:
  --personal            Set the package access to personal This package will
                        be available only on your personal registries
  --private             Set the package access to private This package will
                        require authorized and authenticated access to install
```

upload

```
usage: anaconda upload [-h] [-c CHANNELS] [-l LABELS] [--no-progress]
                       [-u USER] [--all] [-p PACKAGE] [-v VERSION]
                       [-s SUMMARY] [-t PACKAGE_TYPE] [-d DESCRIPTION]
                       [--thumbnail THUMBNAIL] [--private]
                       [--no-register | --register] [--build-id BUILD_ID]
                       [-i | -f | --force]
                       files [files ...]

Upload packages to Anaconda Repository

positional arguments:
  files                 Distributions to upload

optional arguments:
  -h, --help            show this help message and exit
  -c CHANNELS, --channel CHANNELS
                        [DEPRECATED] Add this file to a specific channel.
                        Warning: if the file channels do not include "main",
                        the file will not show up in your user channel
  -l LABELS, --label LABELS
                        Add this file to a specific label. Warning: if the
                        file labels do not include "main", the file will not
                        show up in your user label
  --no-progress         Don't show upload progress
  -u USER, --user USER  User account or Organization, defaults to the current
                        user
  --all                 Use conda convert to generate packages for all
                        platforms and upload them
  --no-register         Don't create a new package namespace if it does not
                        exist
  --register            Create a new package namespace if it does not exist
  --build-id BUILD_ID   Anaconda Repository Build ID (internal only)
  -i, --interactive     Run an interactive prompt if any packages are missing
  -f, --fail            Fail if a package or release does not exist (default)
  --force               Force a package upload regardless of errors

metadata options:
  -p PACKAGE, --package PACKAGE
                        Defaults to the package name in the uploaded file
  -v VERSION, --version VERSION
                        Defaults to the package version in the uploaded file
  -s SUMMARY, --summary SUMMARY
                        Set the summary of the package
  -t PACKAGE_TYPE, --package-type PACKAGE_TYPE
                        Set the package type [ipynb, env]. Defaults to
                        autodetect
  -d DESCRIPTION, --description DESCRIPTION
                        description of the file(s)
  --thumbnail THUMBNAIL
                        Notebook's thumbnail image
  --private             Create the package with private access
```

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```
    anaconda upload CONDA_PACKAGE_1.bz2
    anaconda upload notebook.ipynb
    anaconda upload environment.yml
```

See also:

- *Uploading a conda package*.
- *Uploading PyPI packages*.

download

```
usage: anaconda download [-h] [-f] [-o OUTPUT] handle

Download packages from Anaconda Repository

positional arguments:
  handle                user/notebook

optional arguments:
  -h, --help            show this help message and exit
  -f, --force           Overwrite
  -o OUTPUT, --output OUTPUT
                        Download as

Usage:
    anaconda download notebook
    anaconda download user/notebook
```

remove

```
usage: anaconda remove [-h] [-f] specs [specs ...]

Remove an object from Anaconda Repository

example::

    anaconda remove sean/meta/1.2.0/meta.tar.gz

positional arguments:
  specs        Package written as <user>[/<package>[/<version>[/<filename>]]]

optional arguments:
  -h, --help   show this help message and exit
  -f, --force  Do not prompt removal
```

groups

```
usage: anaconda groups [-h] [--perms {read,write,admin}]
                       {add,show,members,add_member,remove_member,packages,add_package,
↪remove_package}
                       spec

positional arguments:
  {add,show,members,add_member,remove_member,packages,add_package,remove_package}
                        The group management command to execute
  spec                  <organization>/<group_name>/<member>

optional arguments:
  -h, --help            show this help message and exit
  --perms {read,write,admin}
                        The permission the group should provide
```

label

```
usage: anaconda label [-h] [-o ORGANIZATION]
                      (--copy LABEL LABEL | --list | --show LABEL | --lock LABEL | --
↪unlock LABEL | --remove LABEL)

Manage your Anaconda Repository channels

optional arguments:
  -h, --help            show this help message and exit
  -o ORGANIZATION, --organization ORGANIZATION
                        Manage an organizations labels
  --copy LABEL LABEL
  --list                list all labels for a user
  --show LABEL          Show all of the files in a label
  --lock LABEL          Lock a label
  --unlock LABEL        Unlock a label
  --remove LABEL        Remove a label
```

copy

```
usage: anaconda copy [-h] [--to-owner TO_OWNER] [--from-label FROM_LABEL]
                     [--to-label TO_LABEL] [--replace | --update]
                     spec

Copy packages from one account to another

positional arguments:
  spec                  Package - written as user/package/version[/filename]
                        If filename is not given, copy all files in the
                        version
```

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```
optional arguments:
  -h, --help            show this help message and exit
  --to-owner TO_OWNER   User account to copy package to (default: your
                        account)
  --from-label FROM_LABEL
                        Label to copy packages from
  --to-label TO_LABEL   Label to put all packages into
  --replace             Overwrite destination package metadata
  --update              Update missing data in destination package metadata
```

move

```
usage: anaconda move [-h] [--from-label FROM_LABEL] [--to-label TO_LABEL] spec

Move packages between labels.

positional arguments:
  spec                  Package - written as user/package/version[/filename]
                        If filename is not given, move all files in the
                        version

optional arguments:
  -h, --help            show this help message and exit
  --from-label FROM_LABEL
                        Label to move packages from
  --to-label TO_LABEL   Label to move packages to
```

Anaconda Enterprise 4 Notebooks

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.3.3, released on November 5th, 2019.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

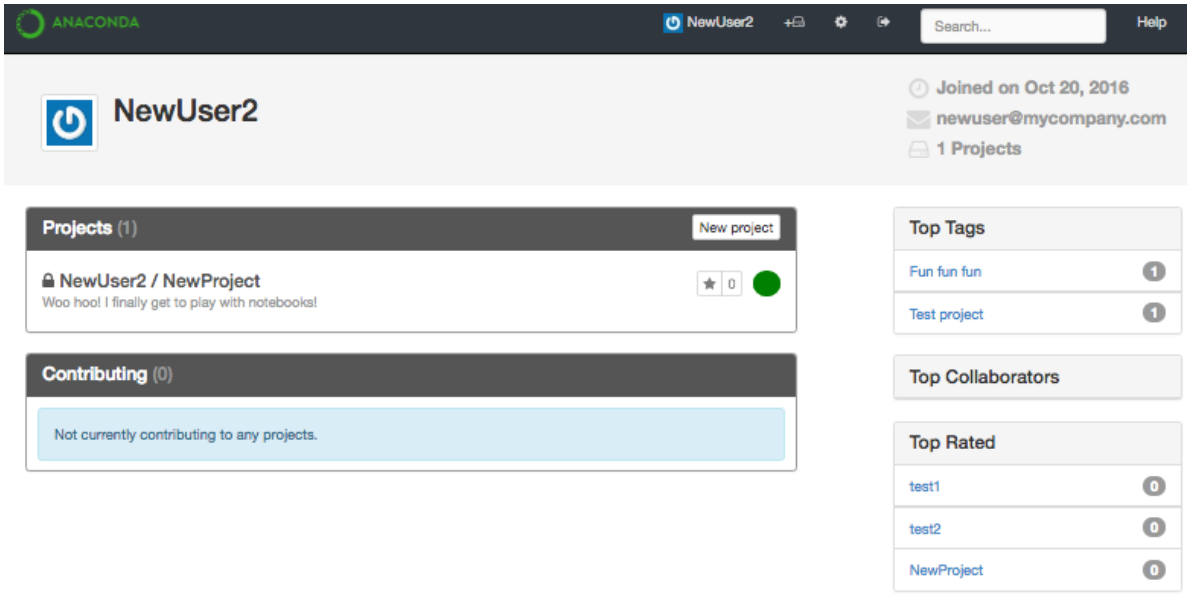
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

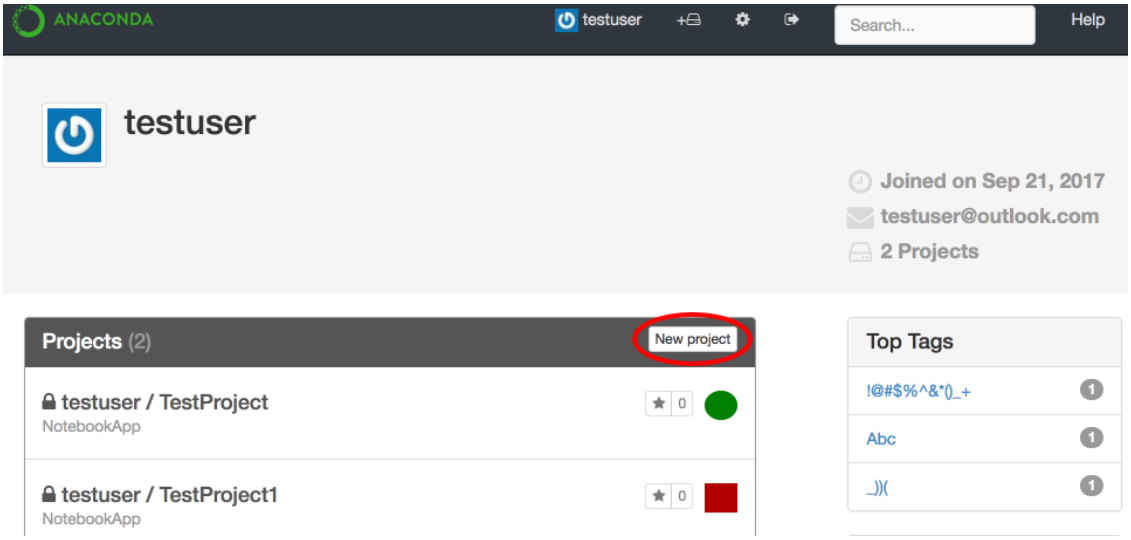
   Your user home page, where all good things happen, is displayed:



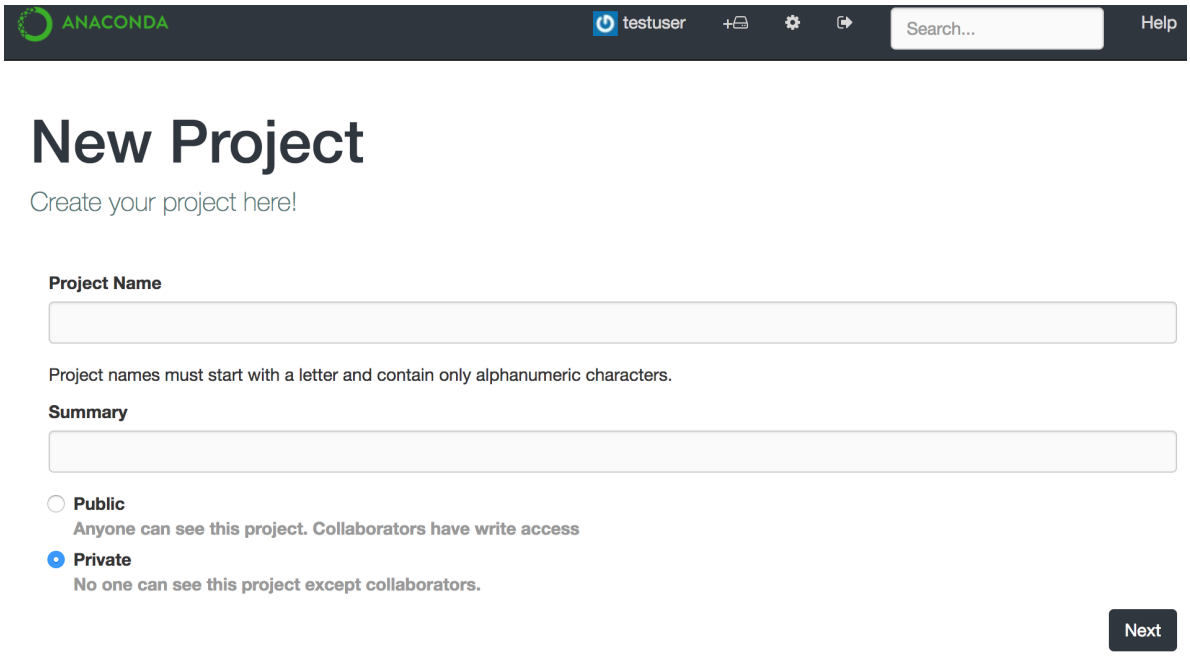
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as "Testing."

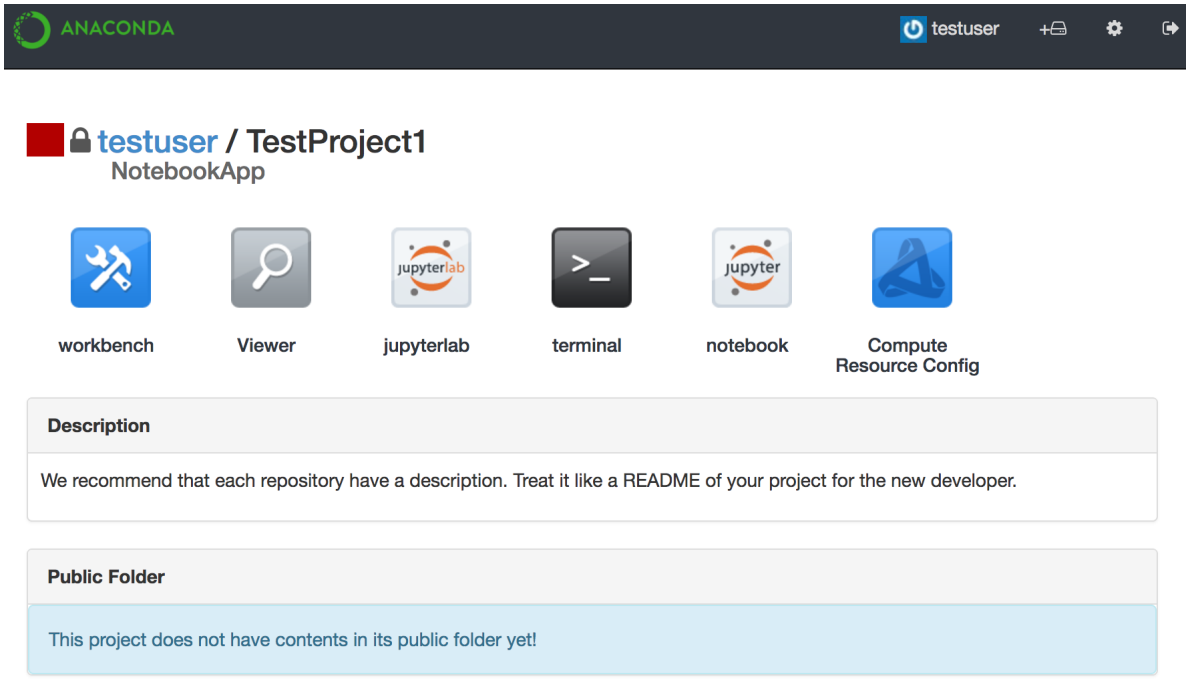


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

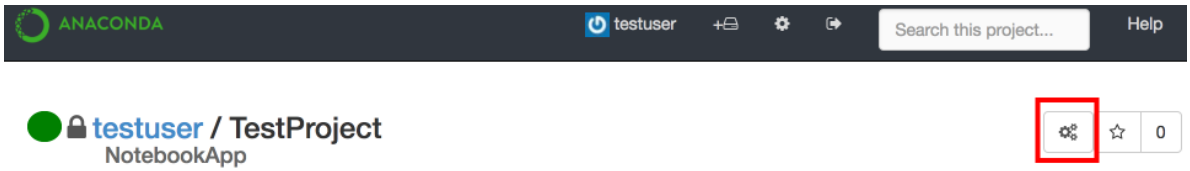
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

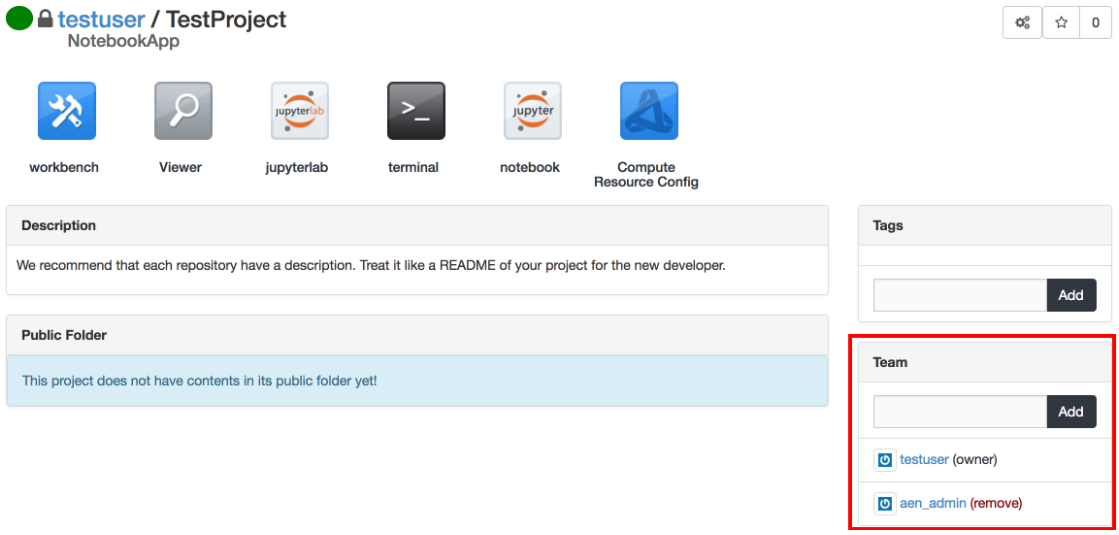
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

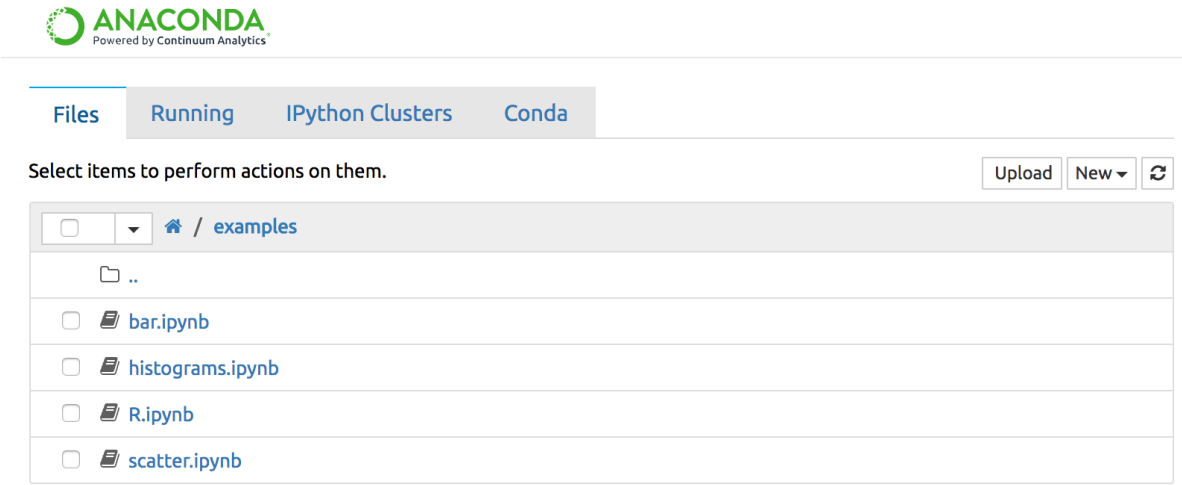


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

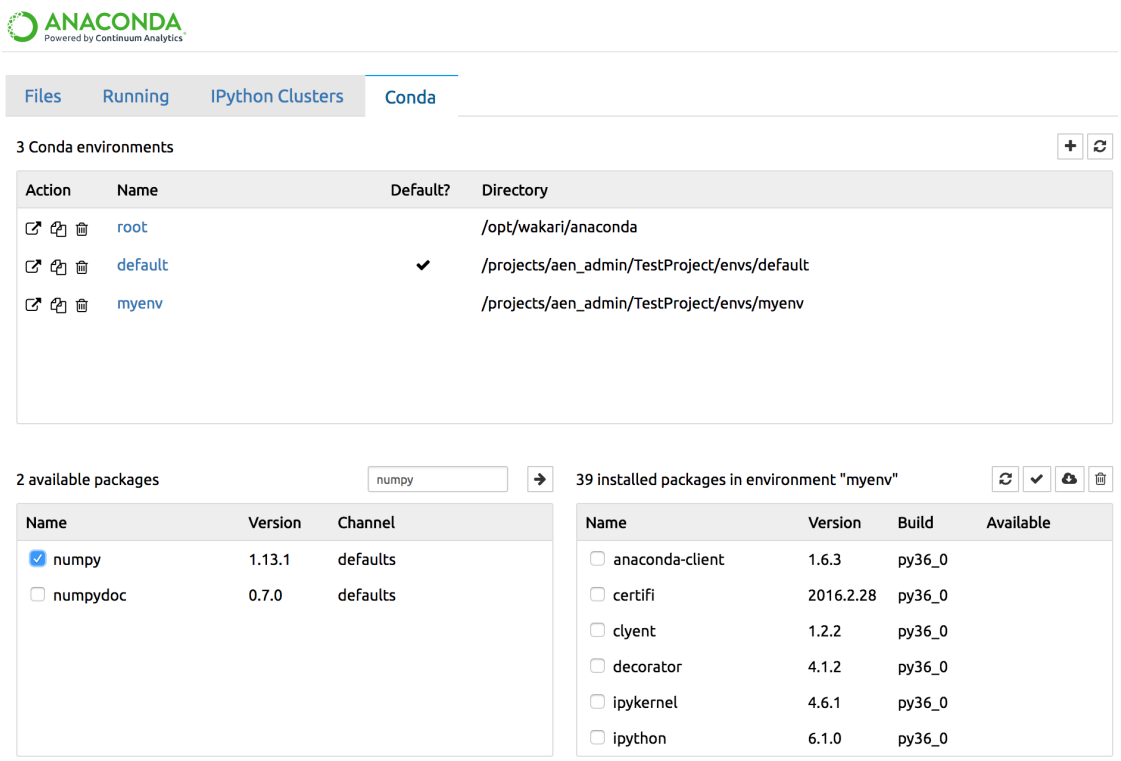
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



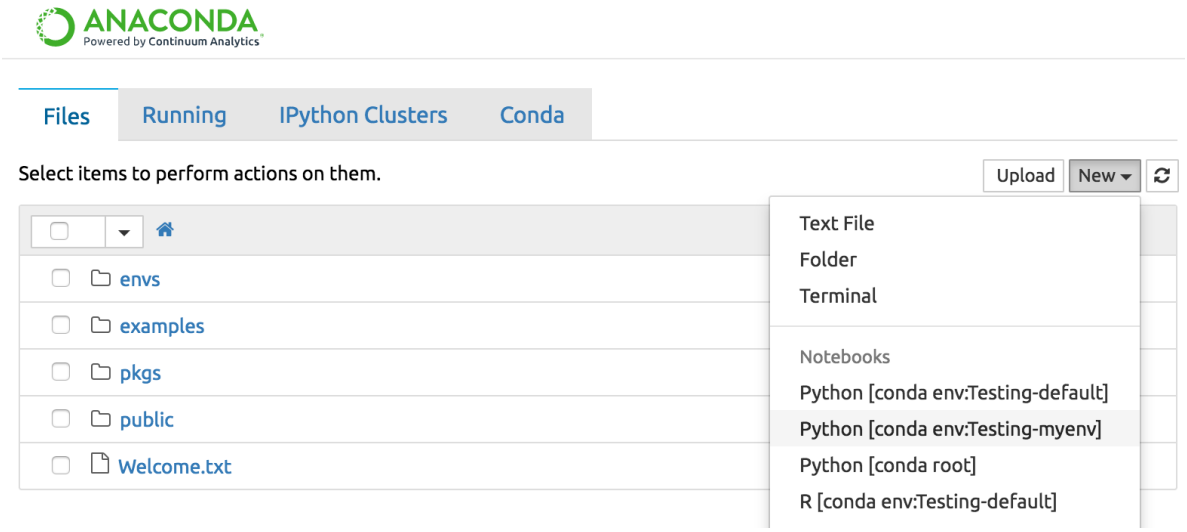
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



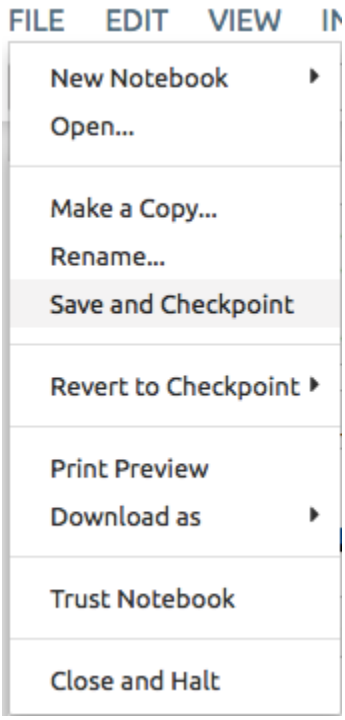
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

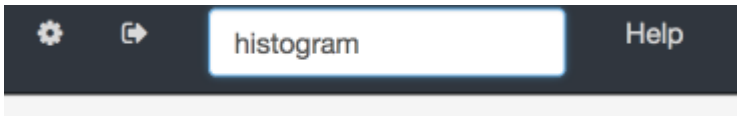
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

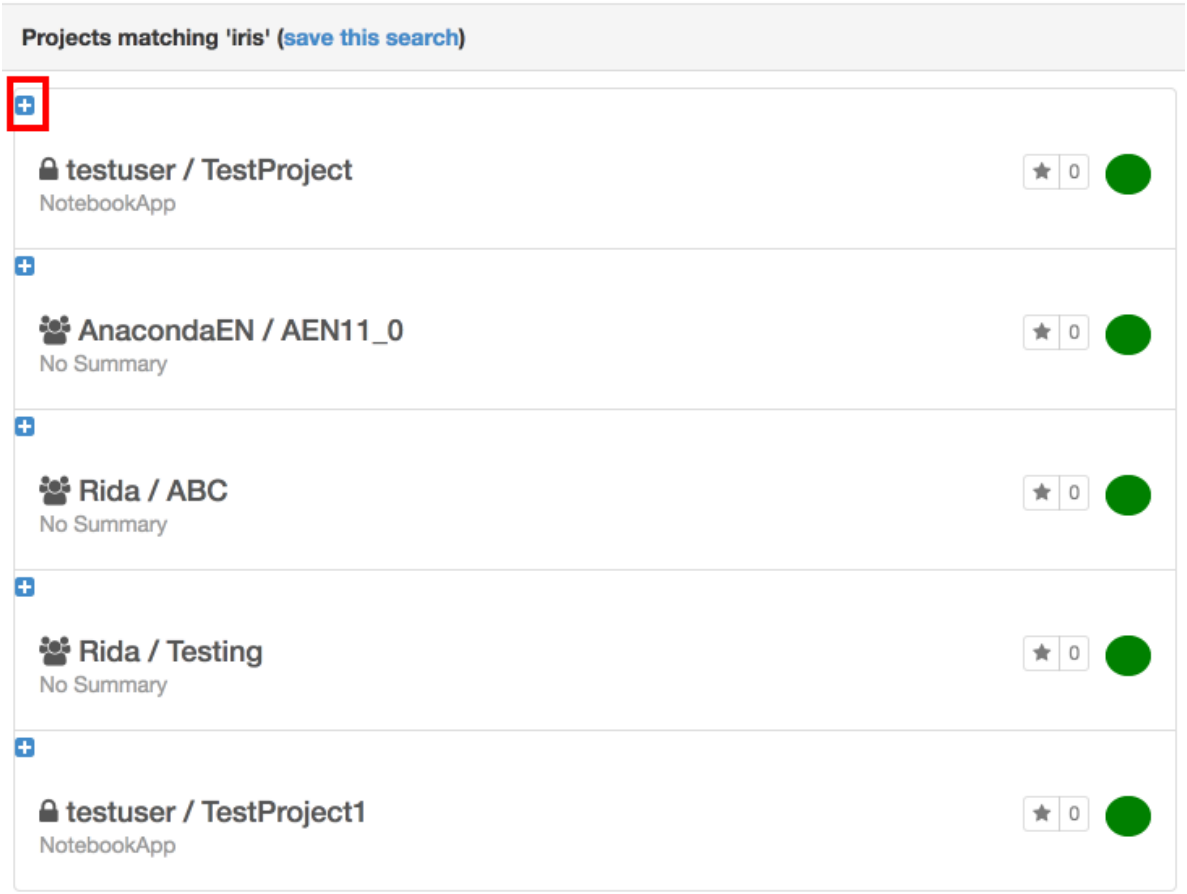
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

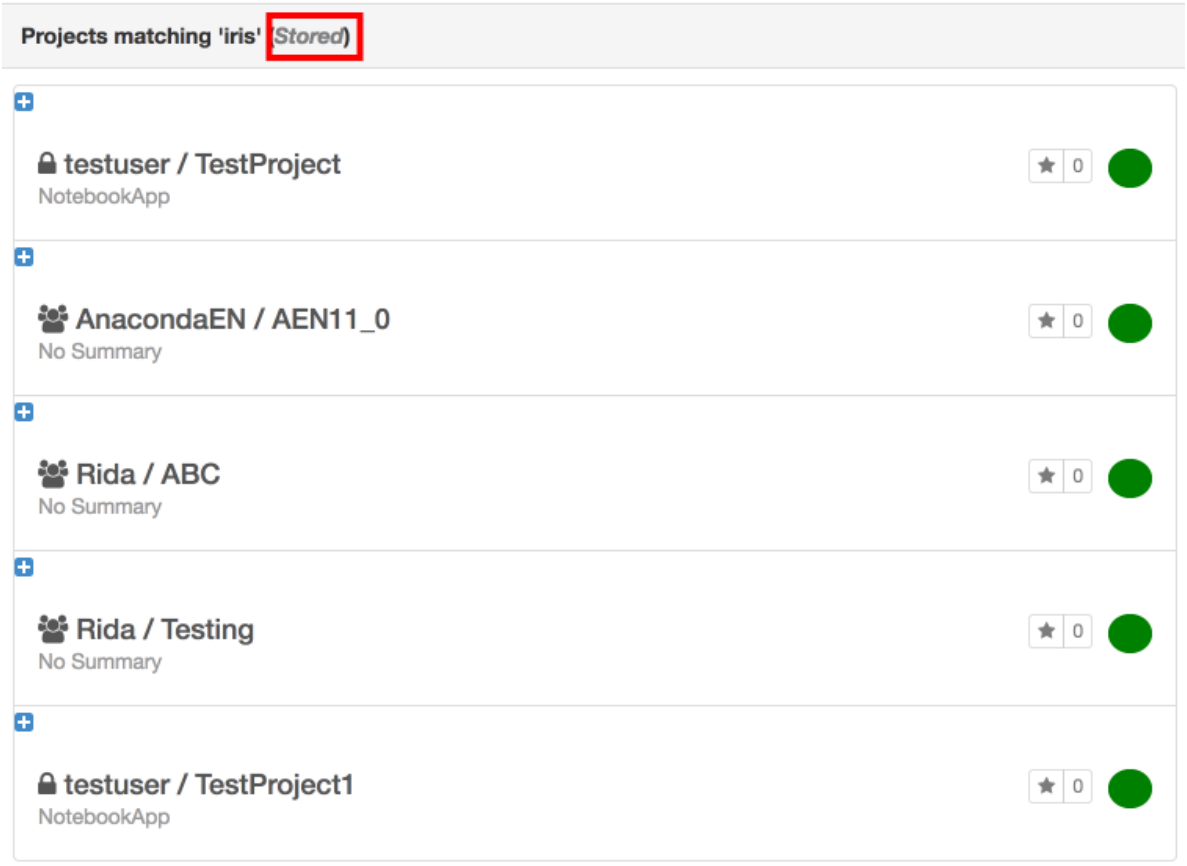


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

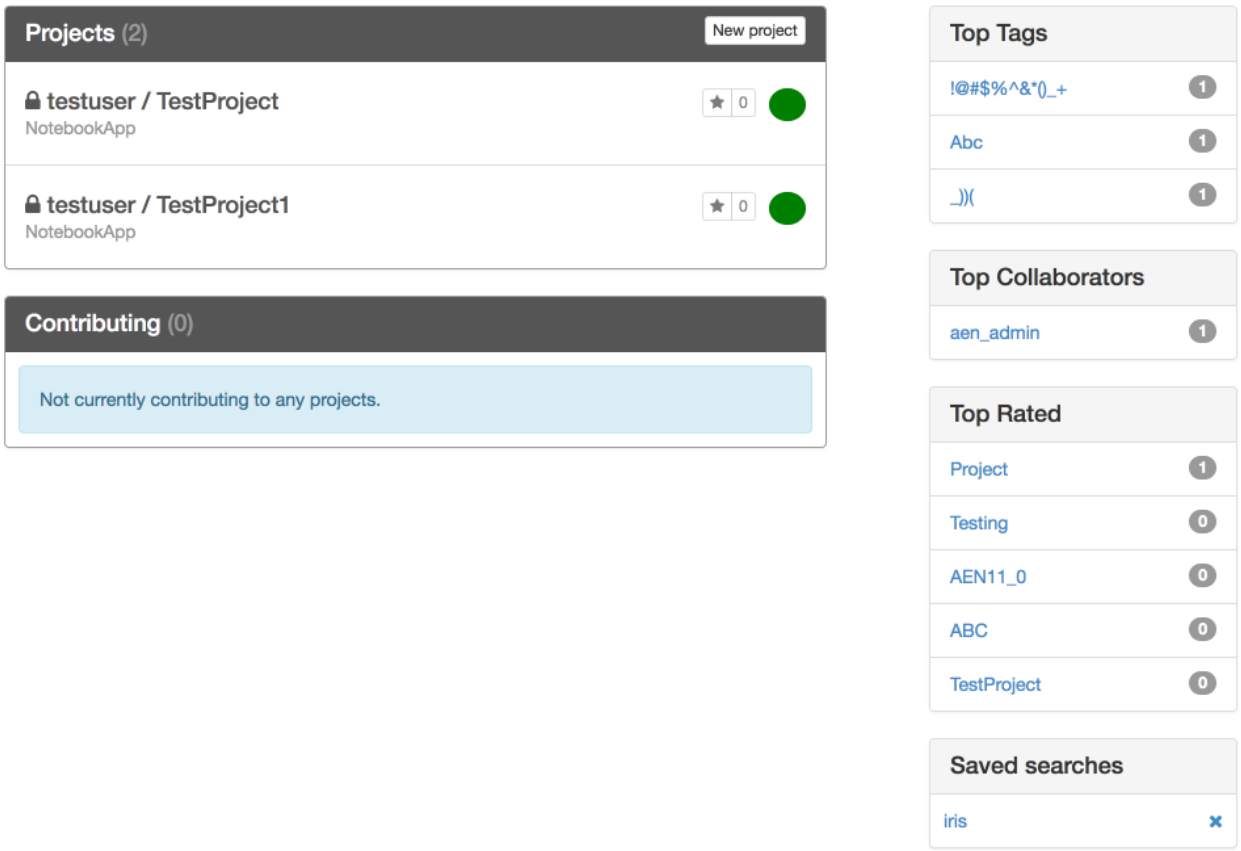
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

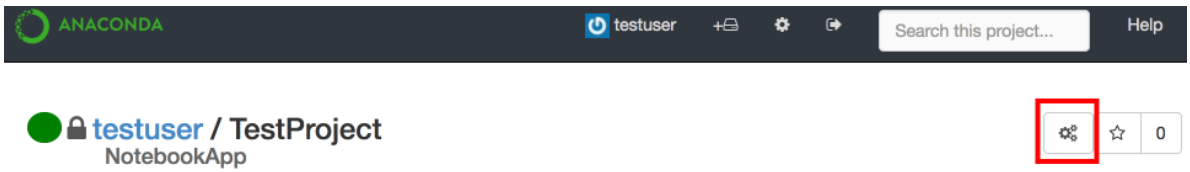
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:

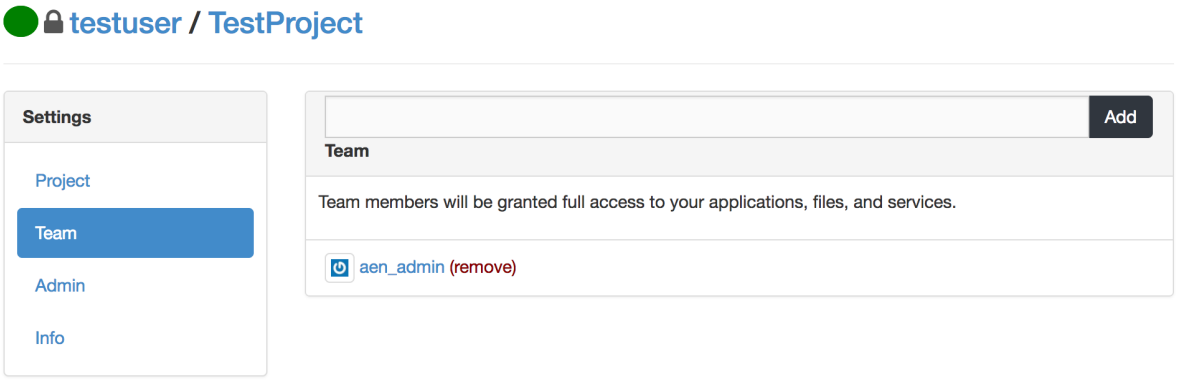


Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.



Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

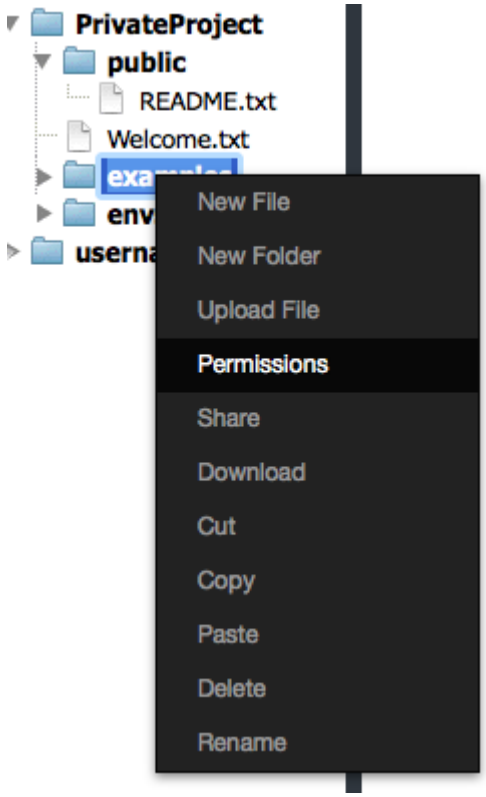
By default, all of the team members on a project have read and write access permissions for all project assets.

The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

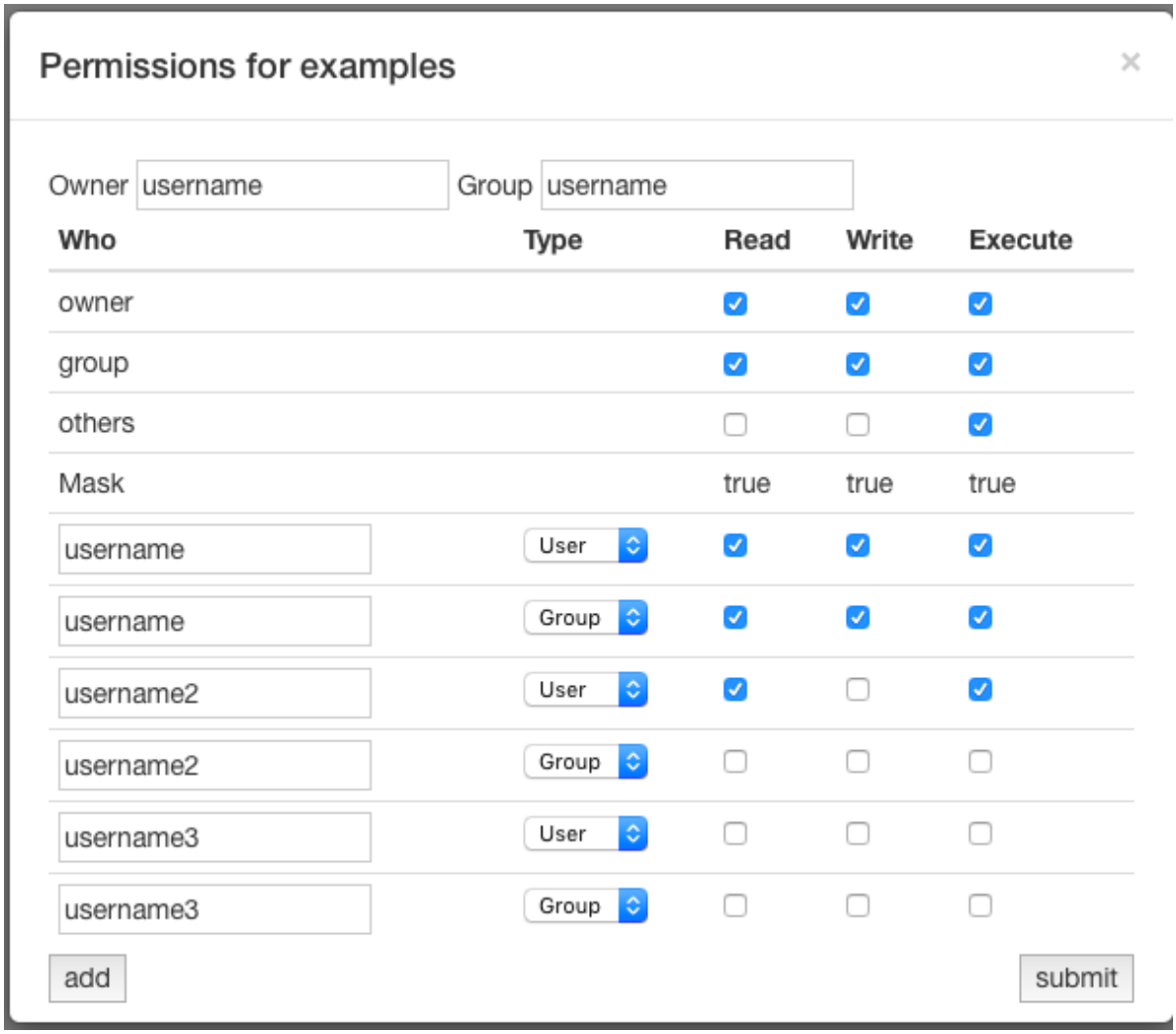
1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.
4. In the menu that displays, select Permissions:



A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

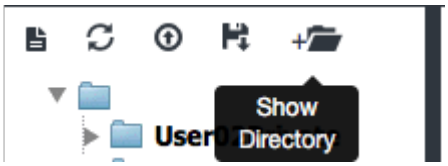
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

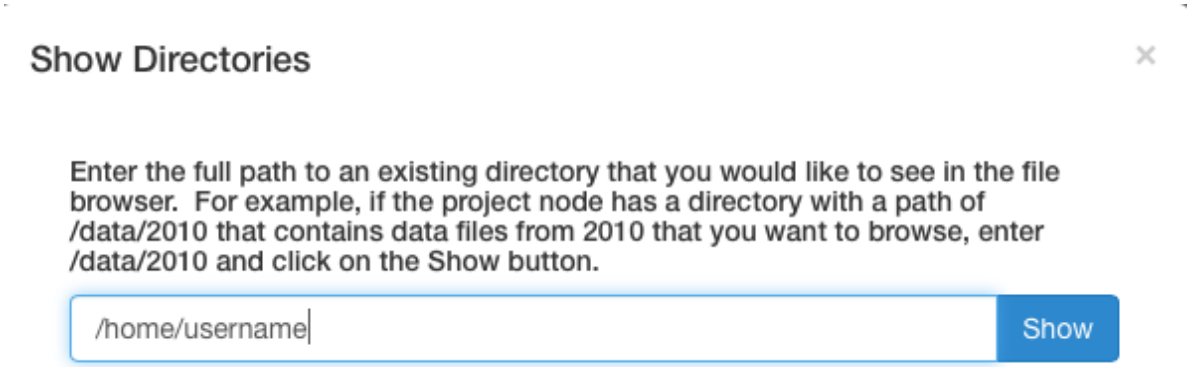
1. Click the Show Directory button at the top of the Workbench File Manager:



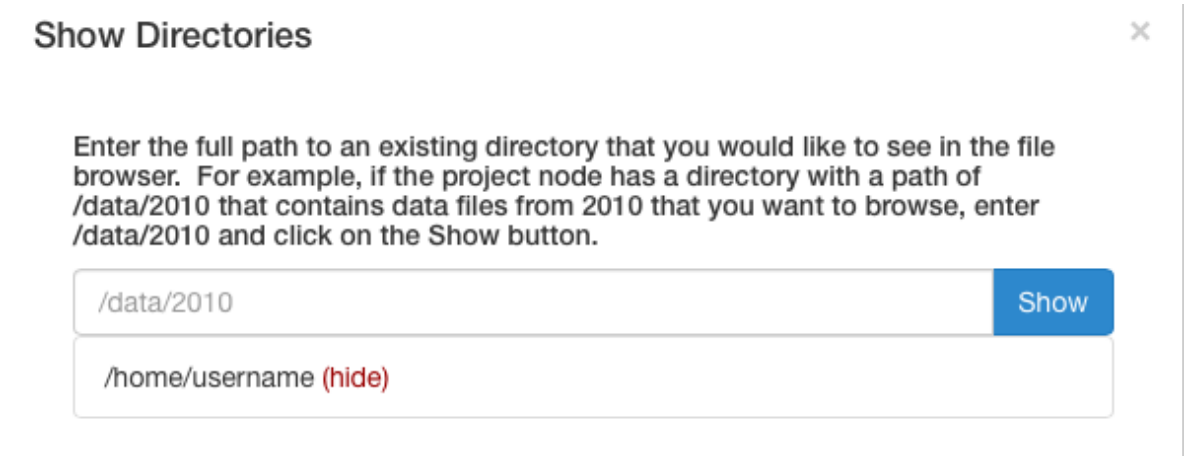
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.

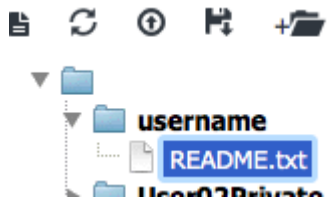


3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

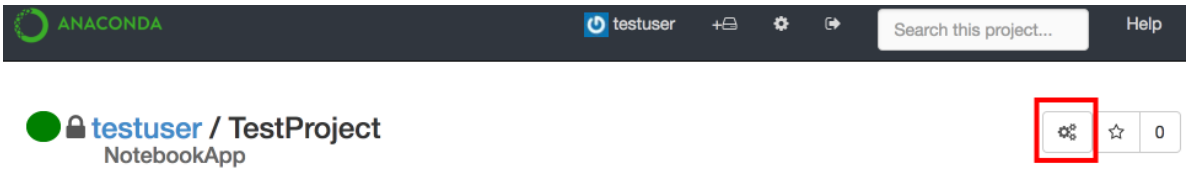
   The shared file is displayed in the File Manager:



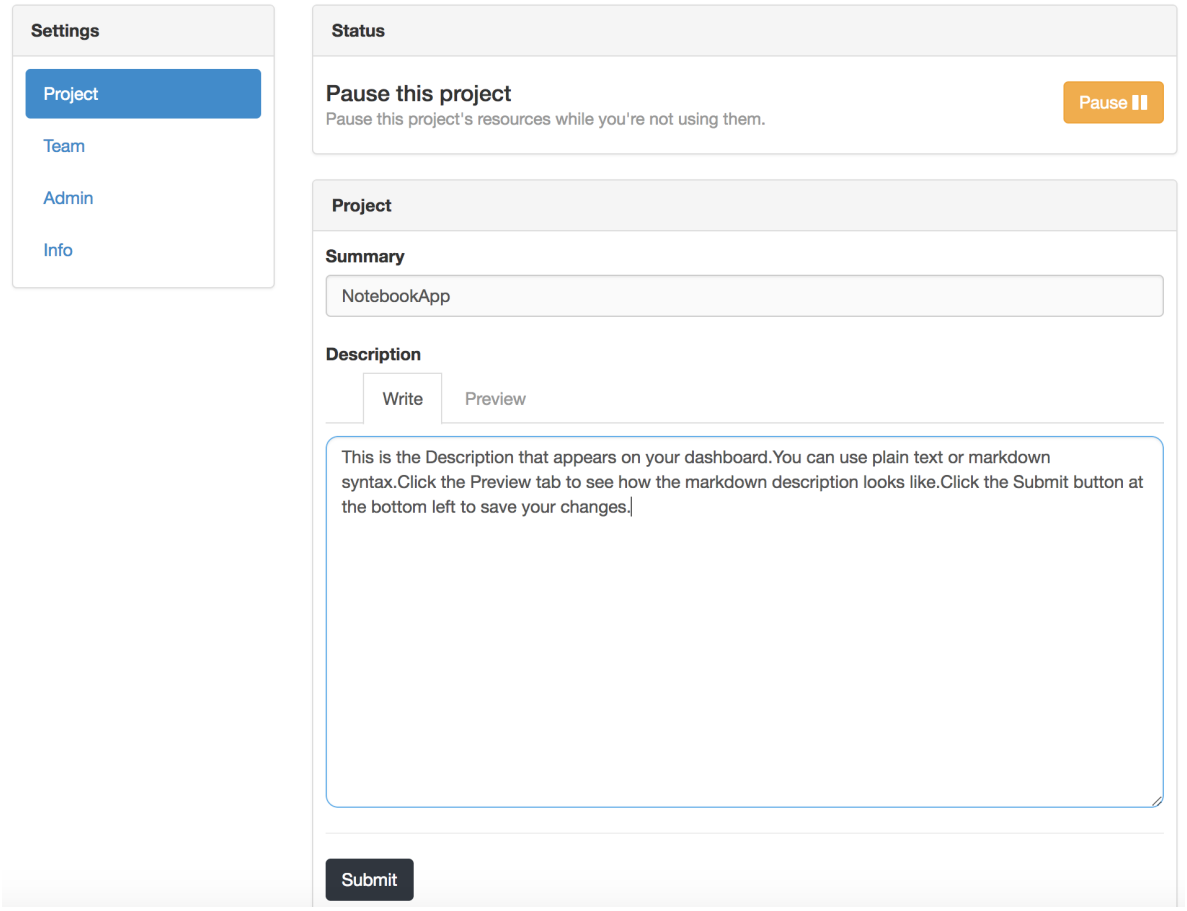
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



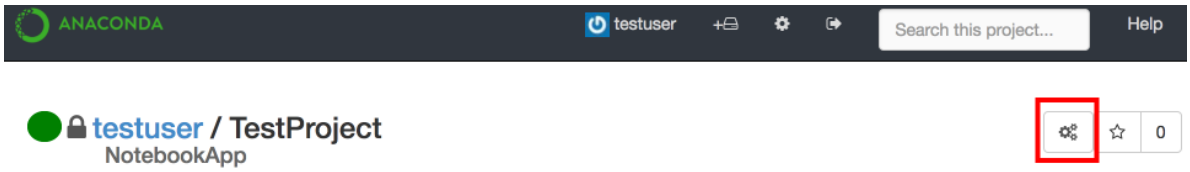
2. In the **Settings** menu, select Project.



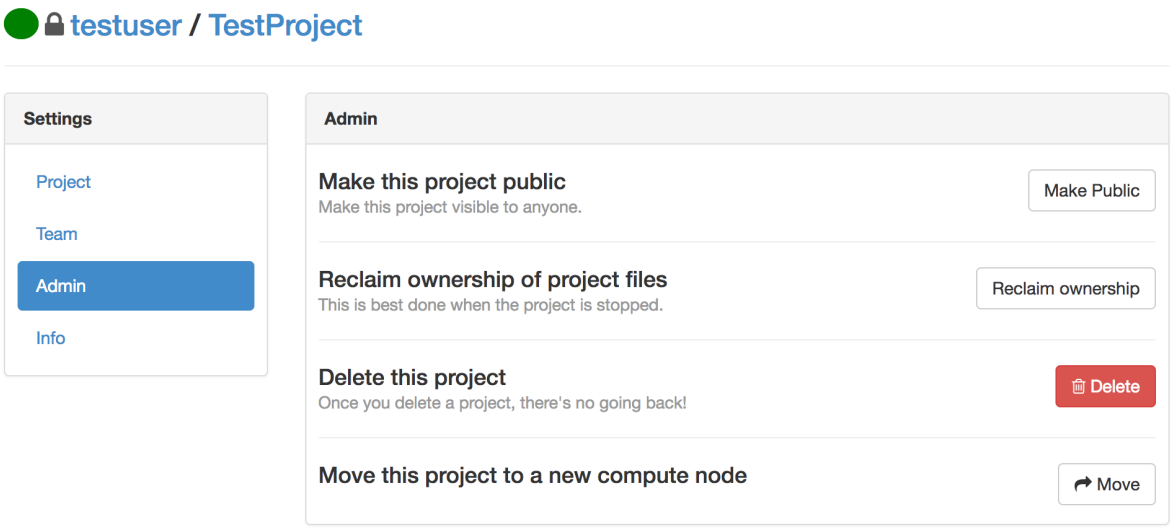
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



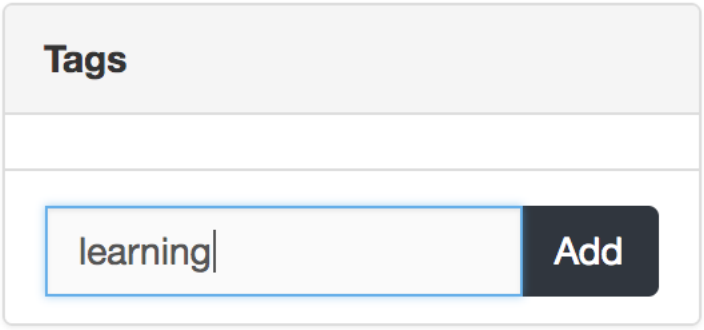
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

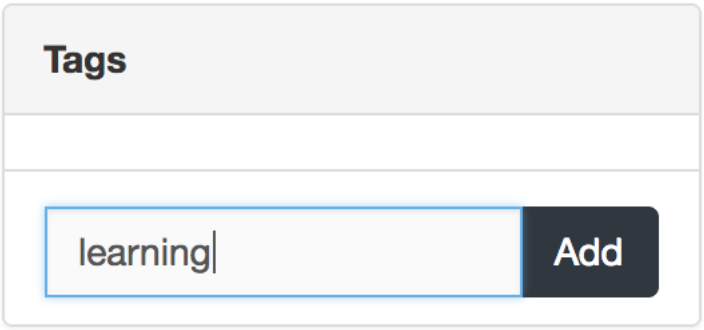
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

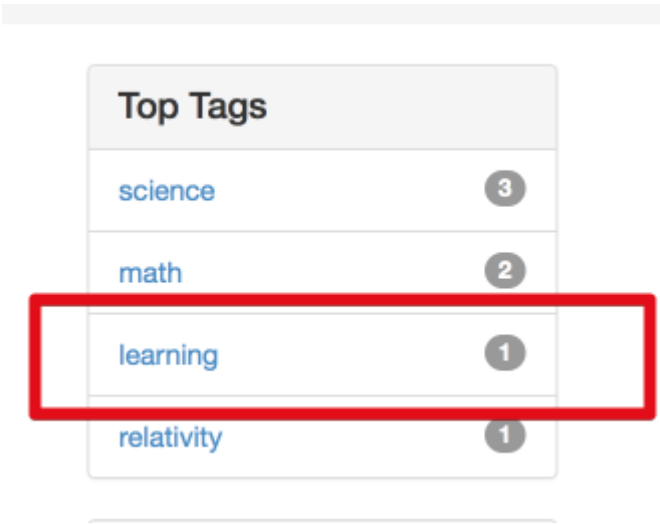


2. Click the Add button.

   The new tag is added to the Tags list:

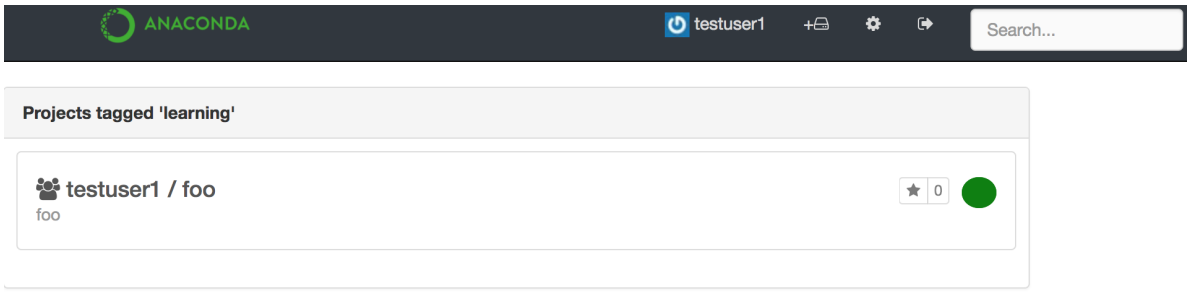


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



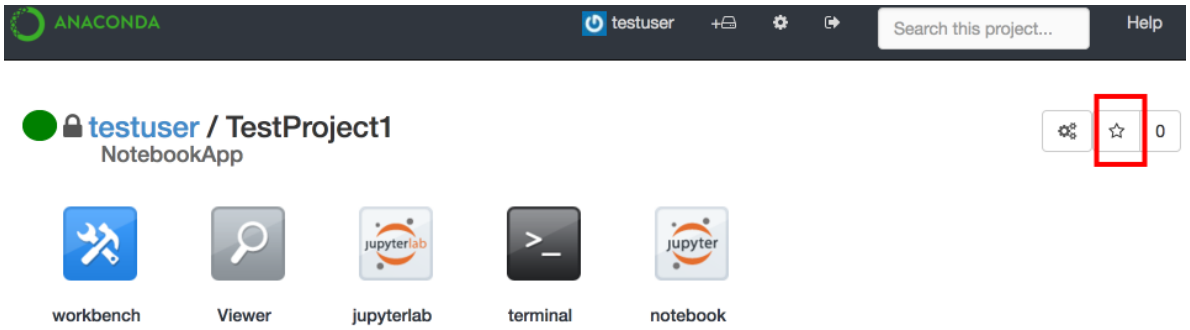
2. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

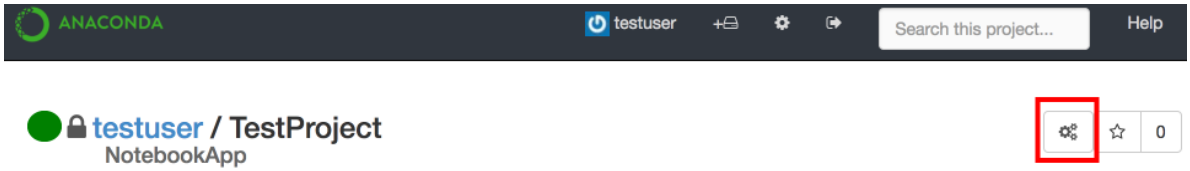


3. To unstar a project, click the Star icon again.

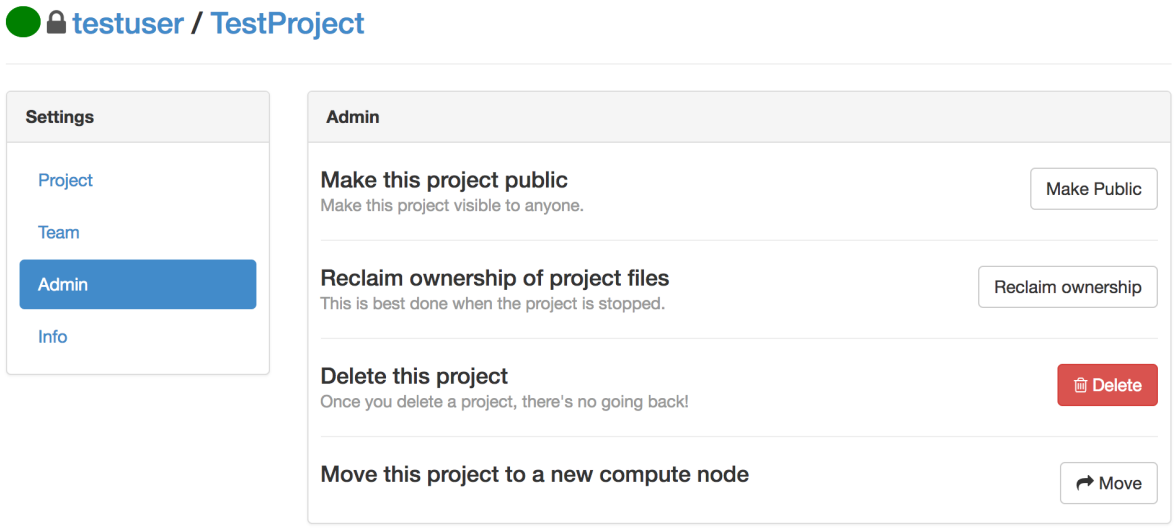
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



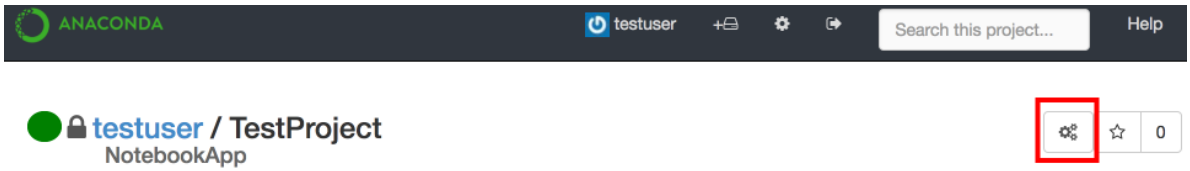
3. In the **Settings** menu, select Admin.



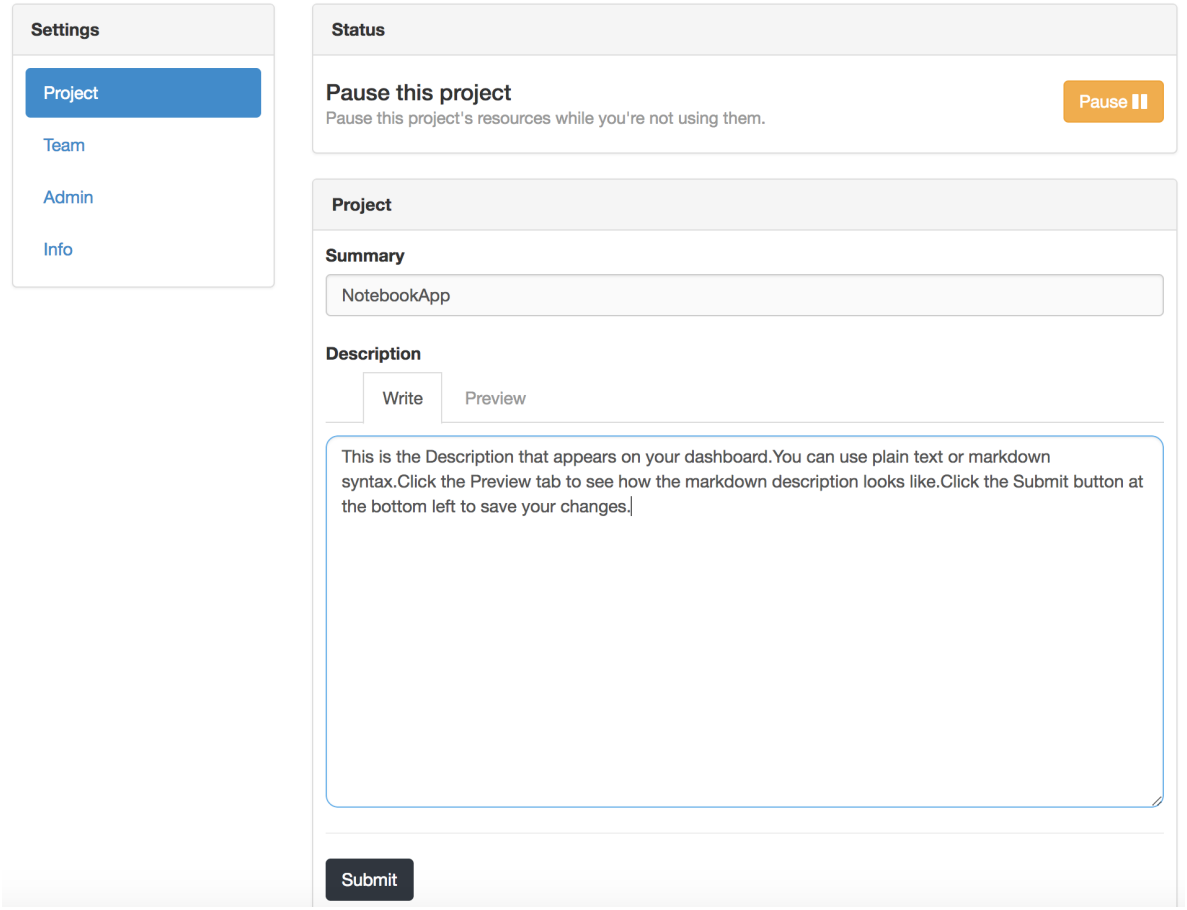
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



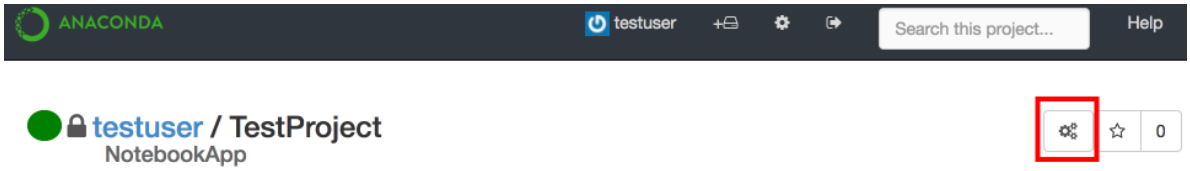
2. In the **Settings** menu, select Project.



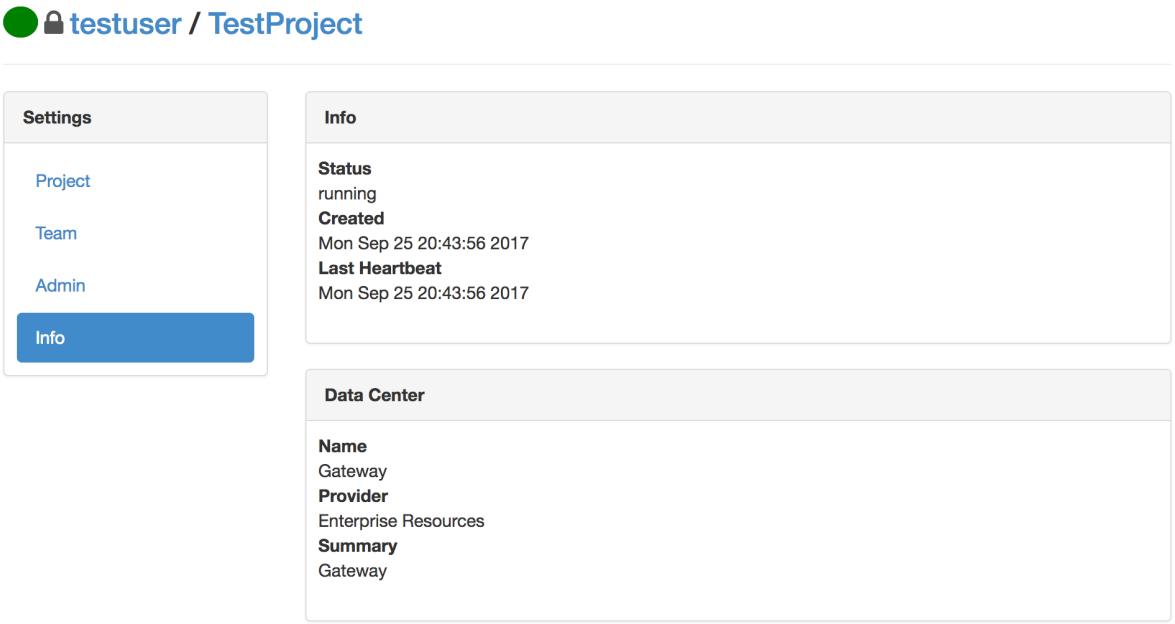
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

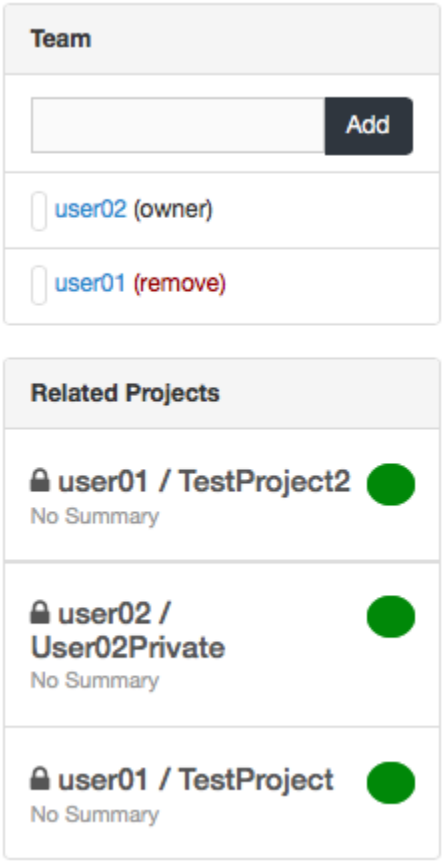


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

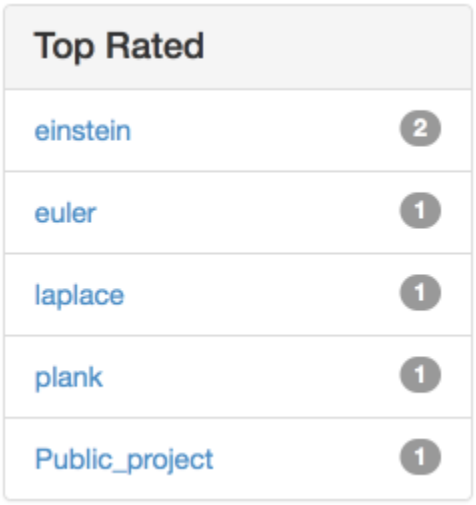
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

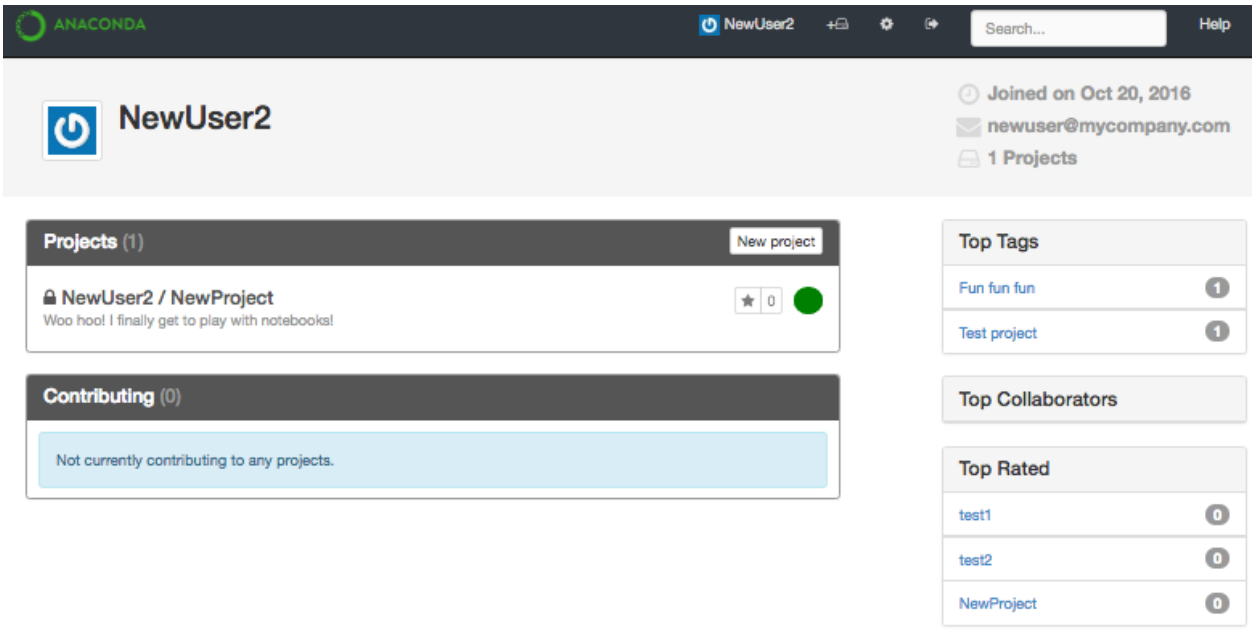


The number next to a project represents the number of stars that have been given to that project.

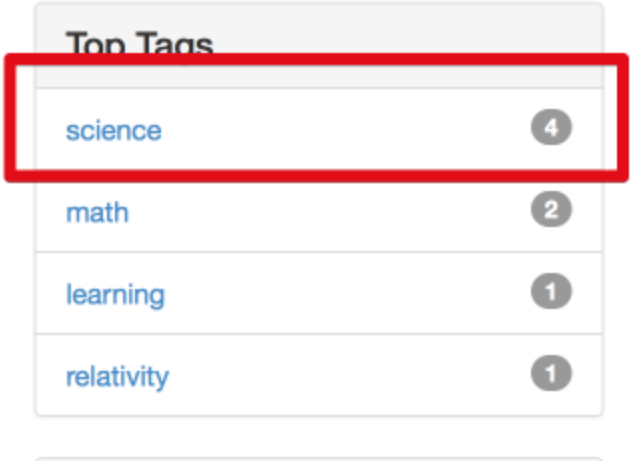
Click a project name to view the project's home page.

Using tags to find a project

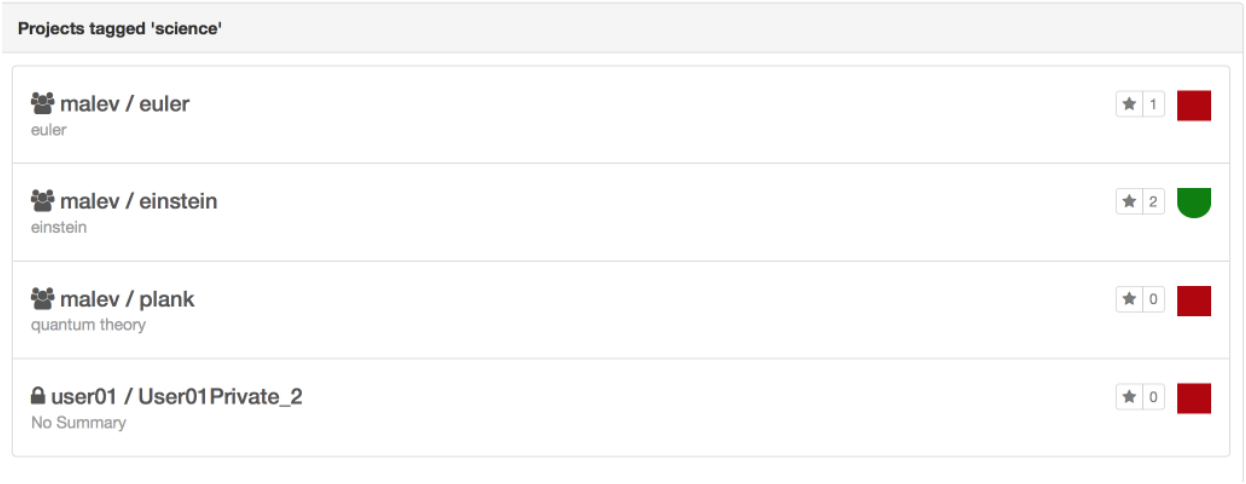
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

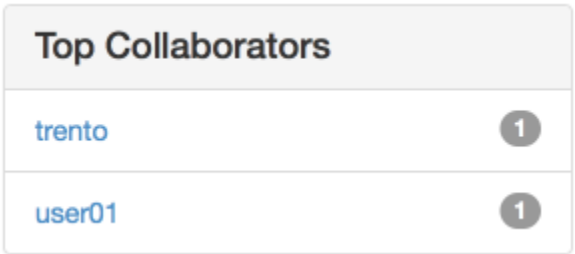


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

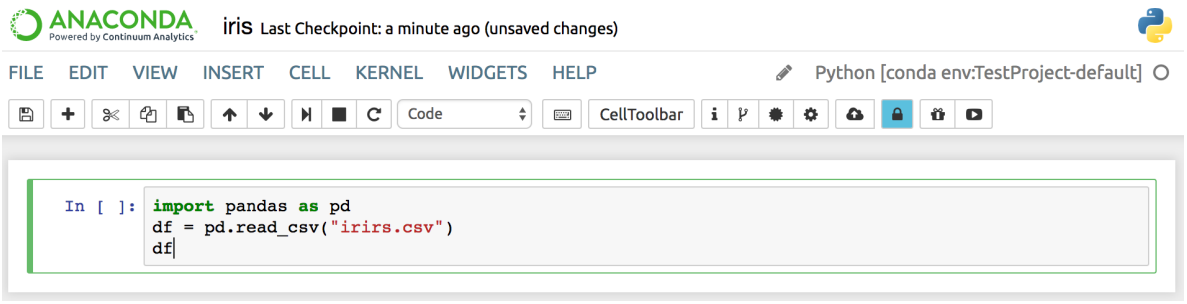
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

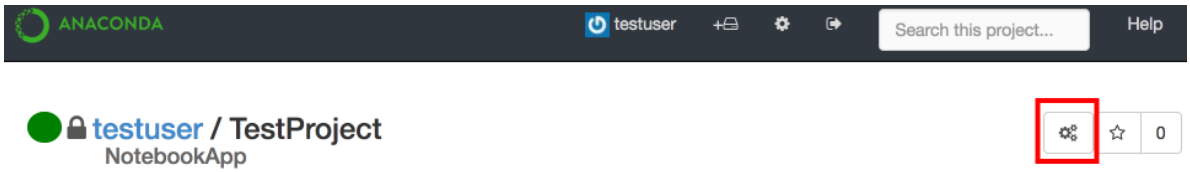
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

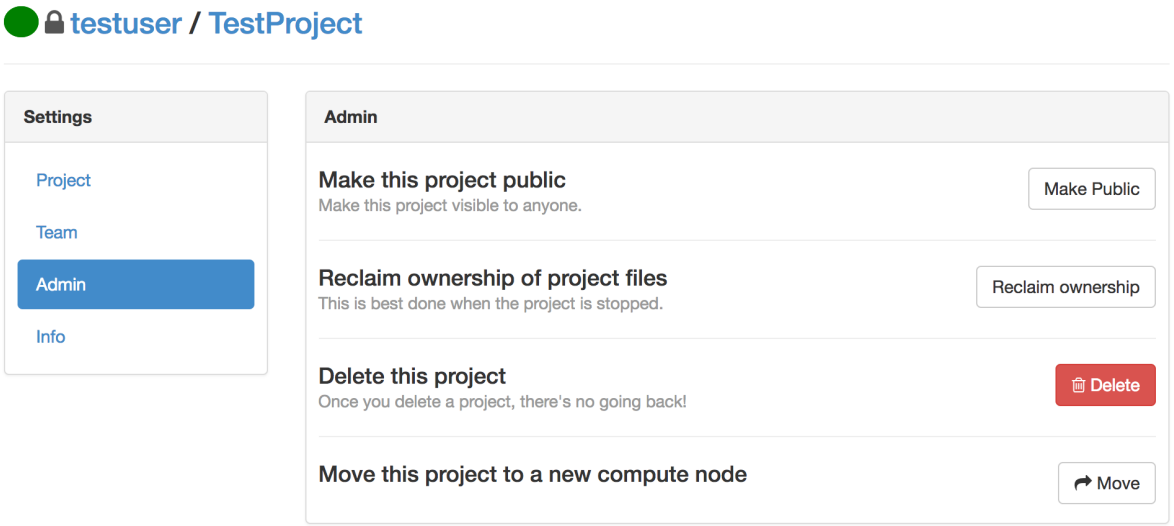
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



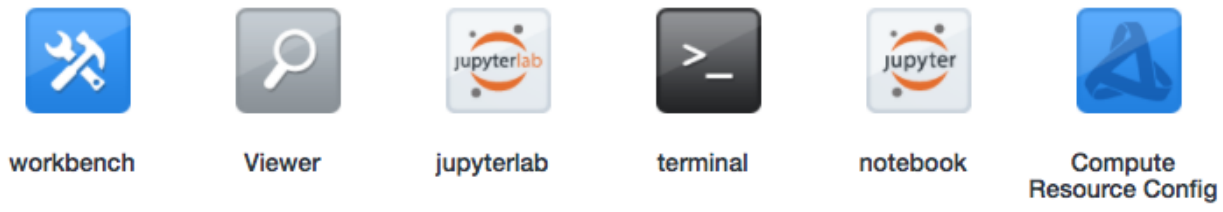
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Note: This page of documentation applies to Anaconda Enterprise 4. Click here if you are looking for Data Science & AI Workbench documentation.

Using Workbench

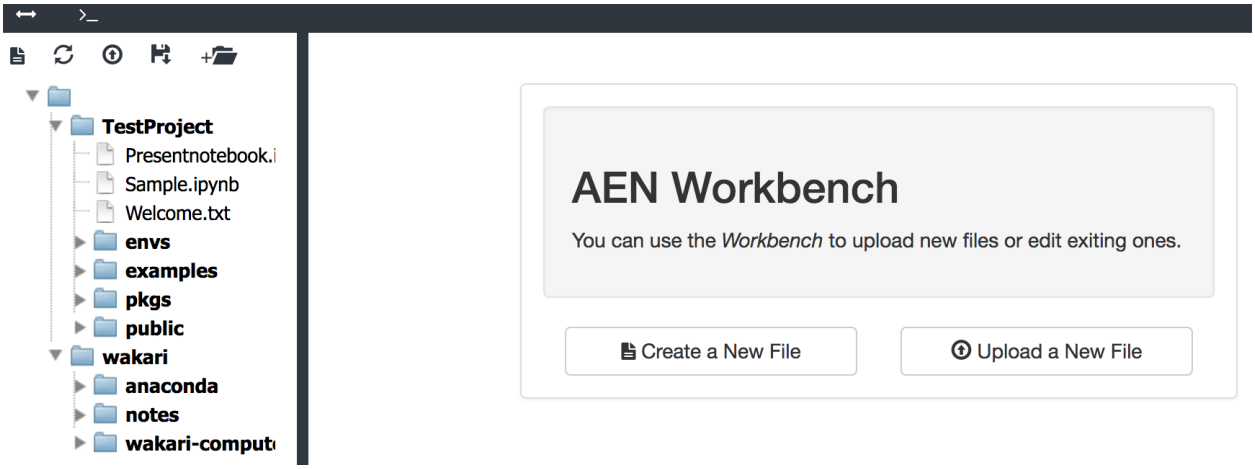
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.

- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

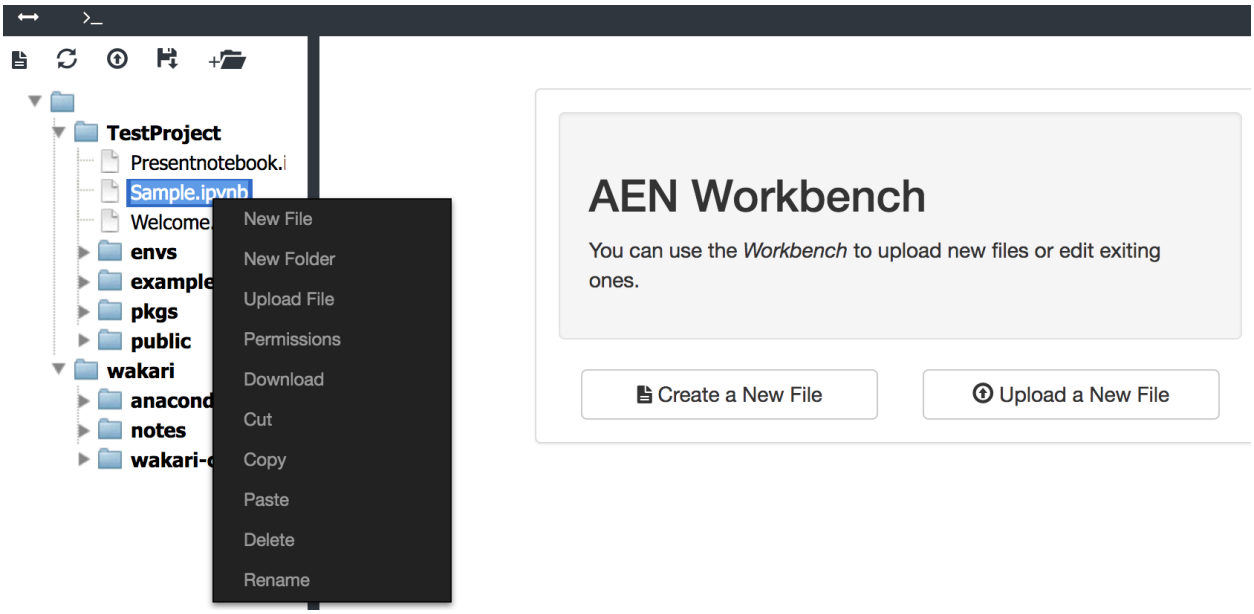
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

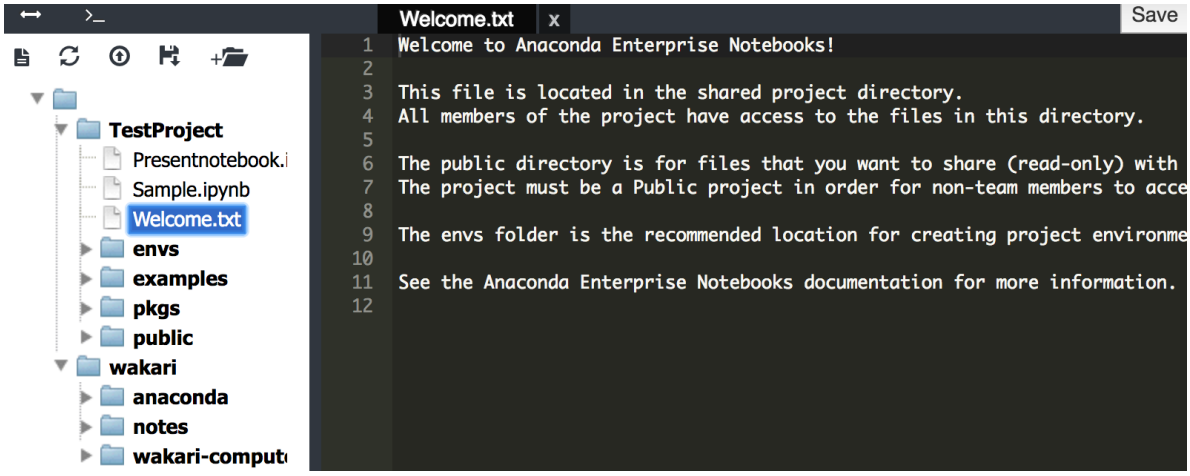
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

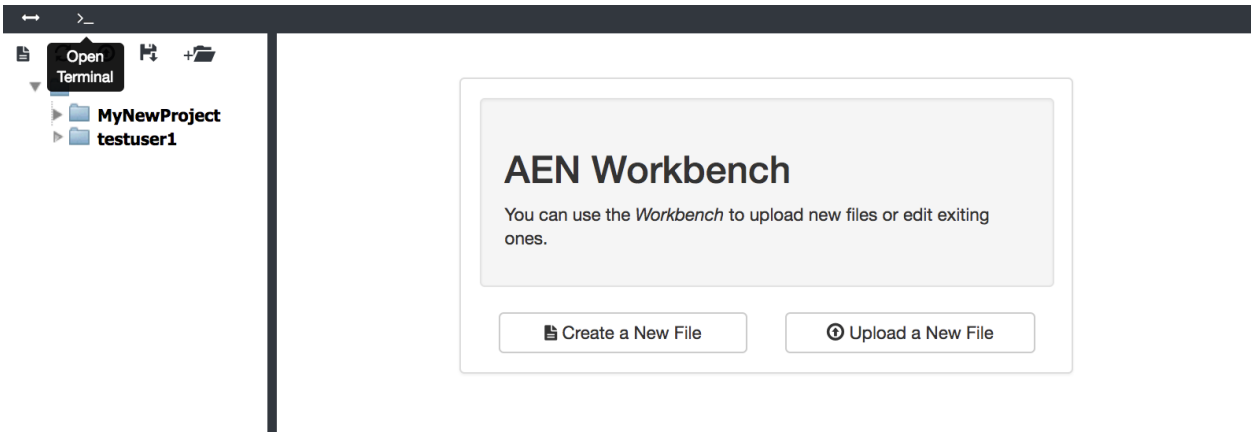


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

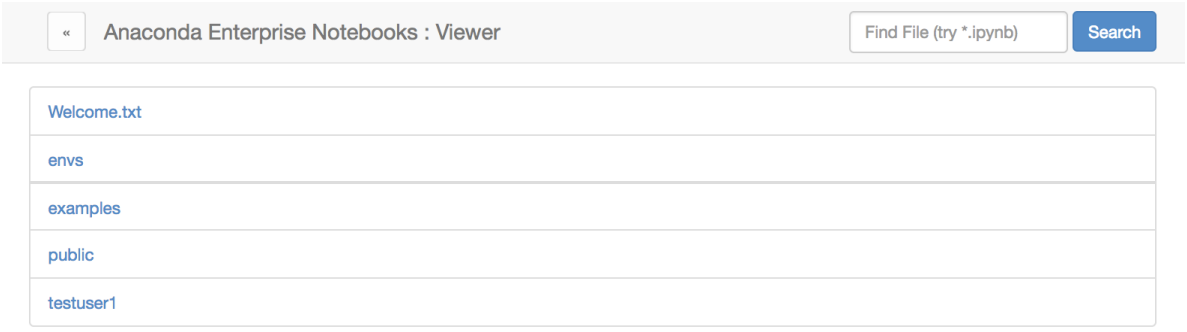
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

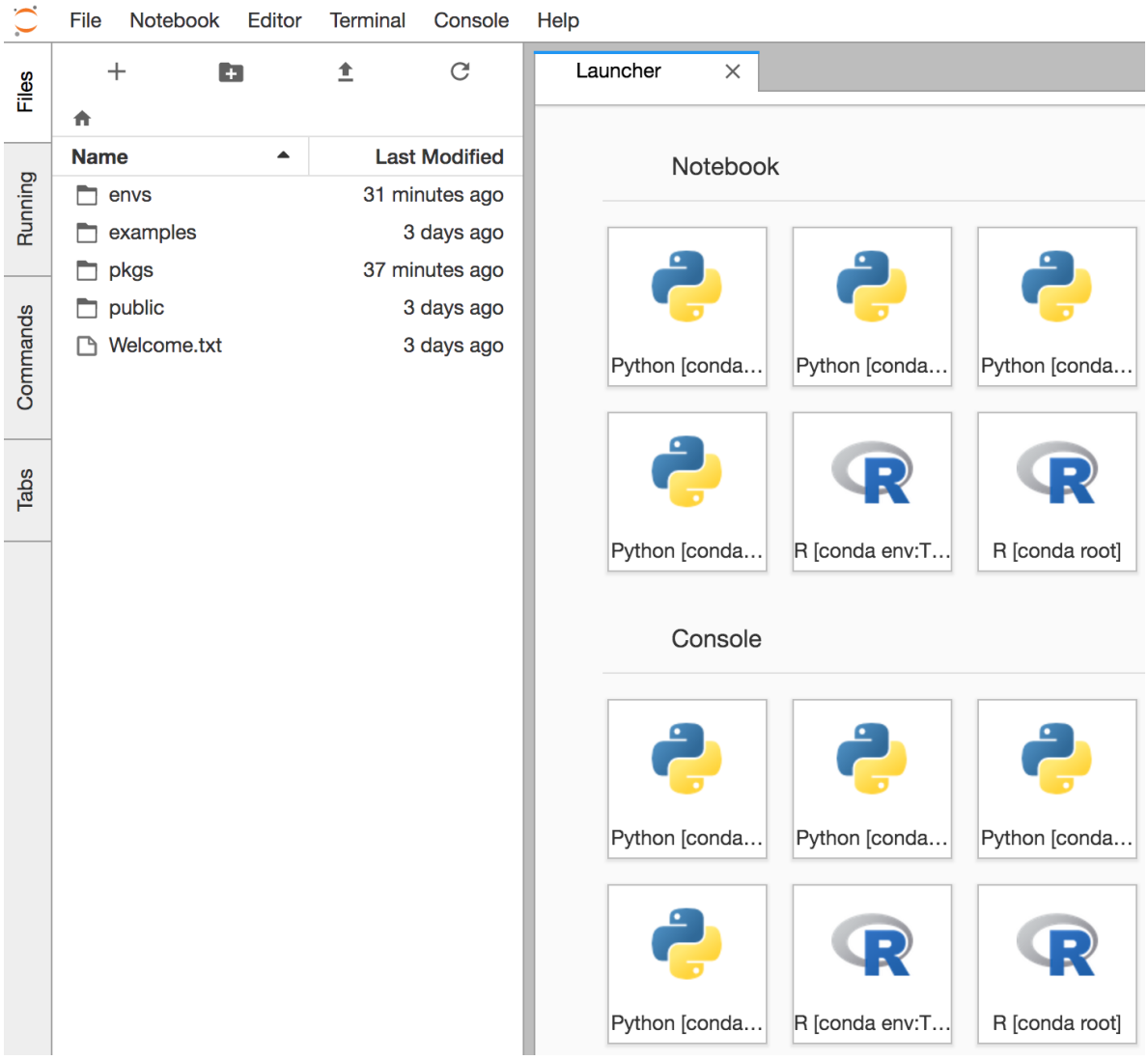
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:



Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:

```
+ 1                                                                    bash
(/projects/aen_admin/TestProject/envs/default) ls
envs  examples  pkgs  Presentnotebook.ipynb  public  Sample.ipynb  Welcome
(/projects/aen_admin/TestProject/envs/default)
```

Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

   Terminal opens the project directory in a new browser window.

   By default, the project directory is `/projects/username/project-name`.

   EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

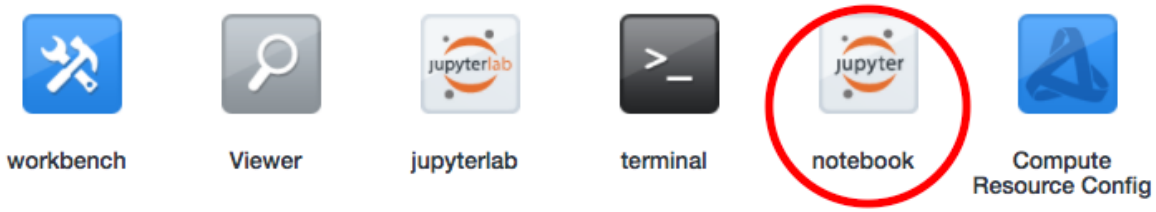
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

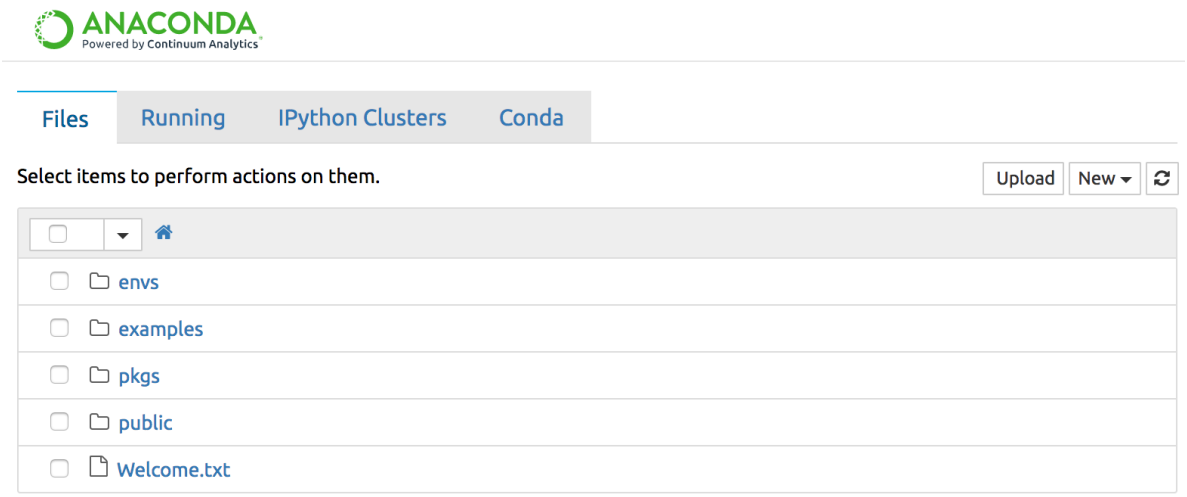
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

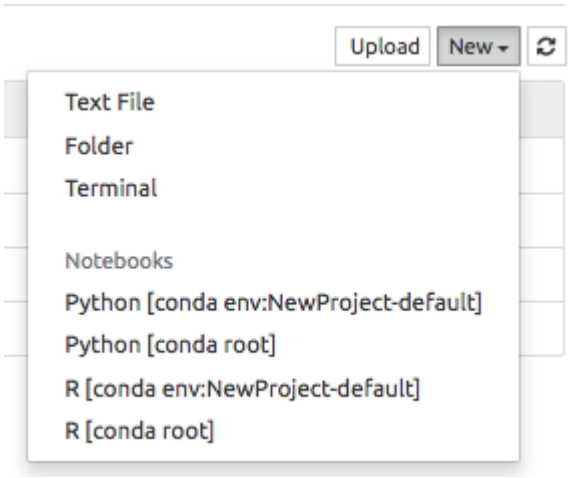
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

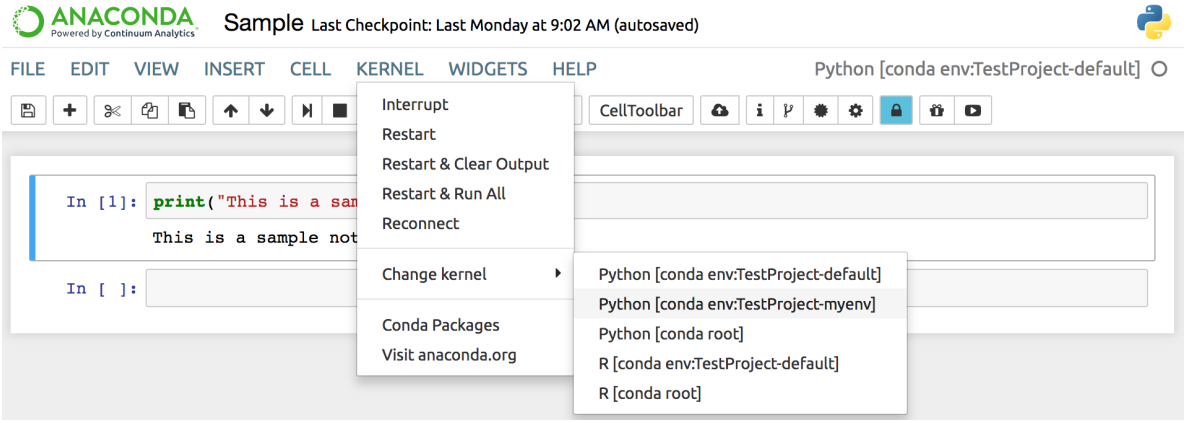
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. To prevent merge conflicts, this model uses a "latest wins" policy as its main merging strategy.

The RCM Jupyter Notebook extension adds four buttons:

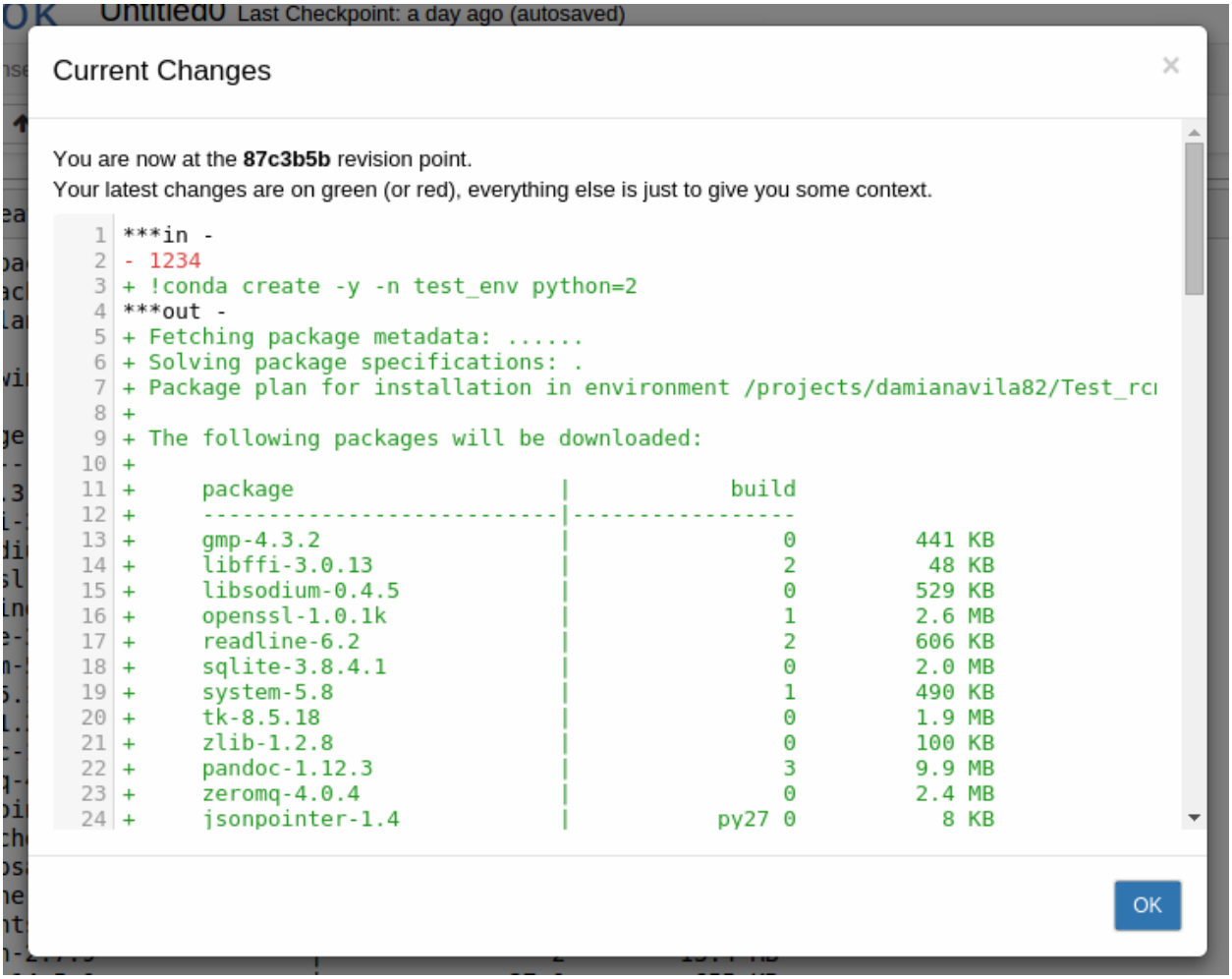
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

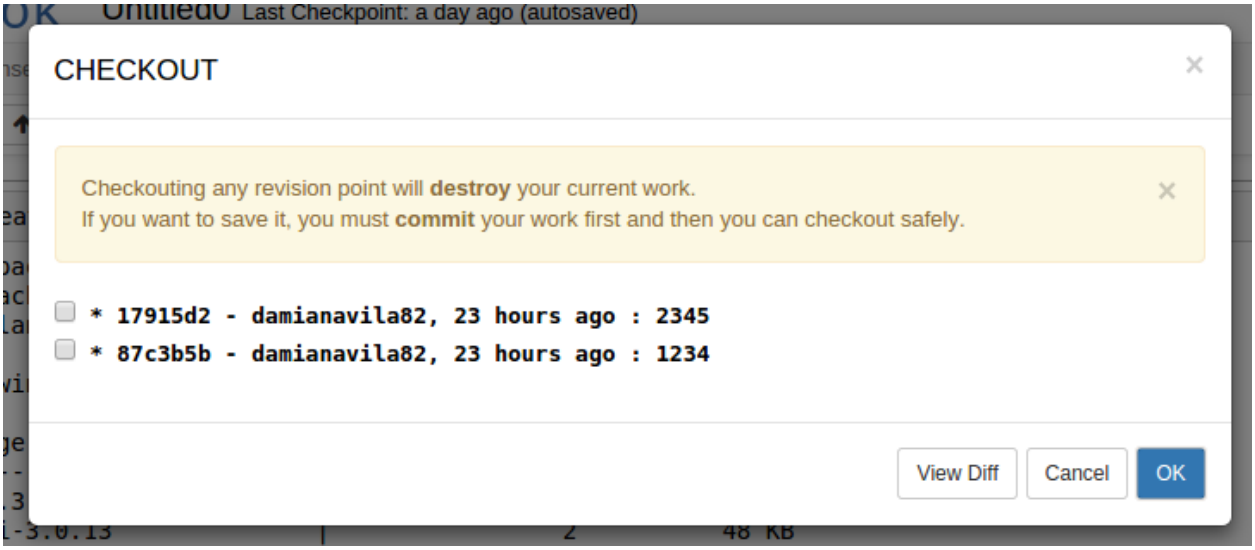
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

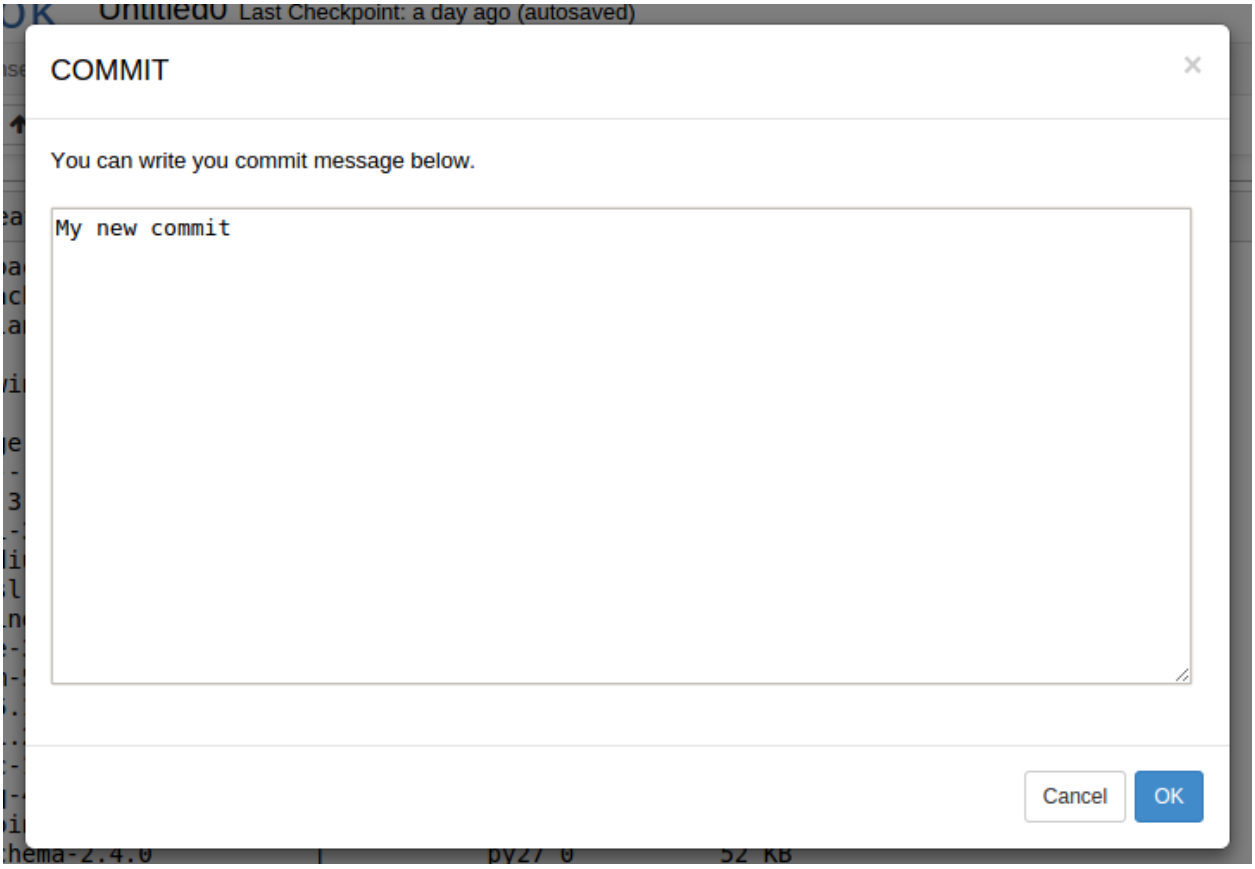
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

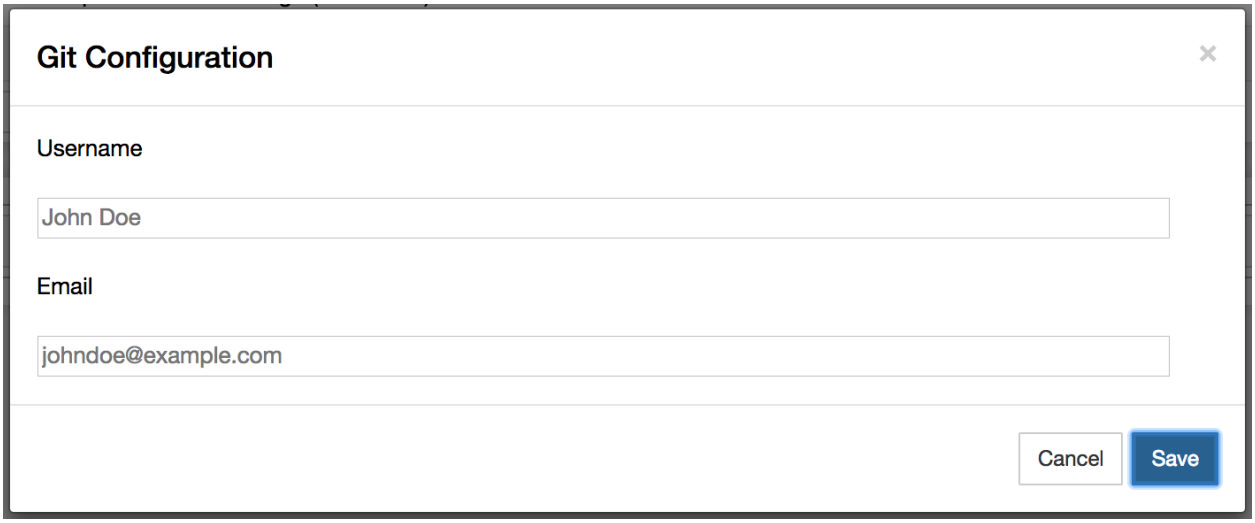
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

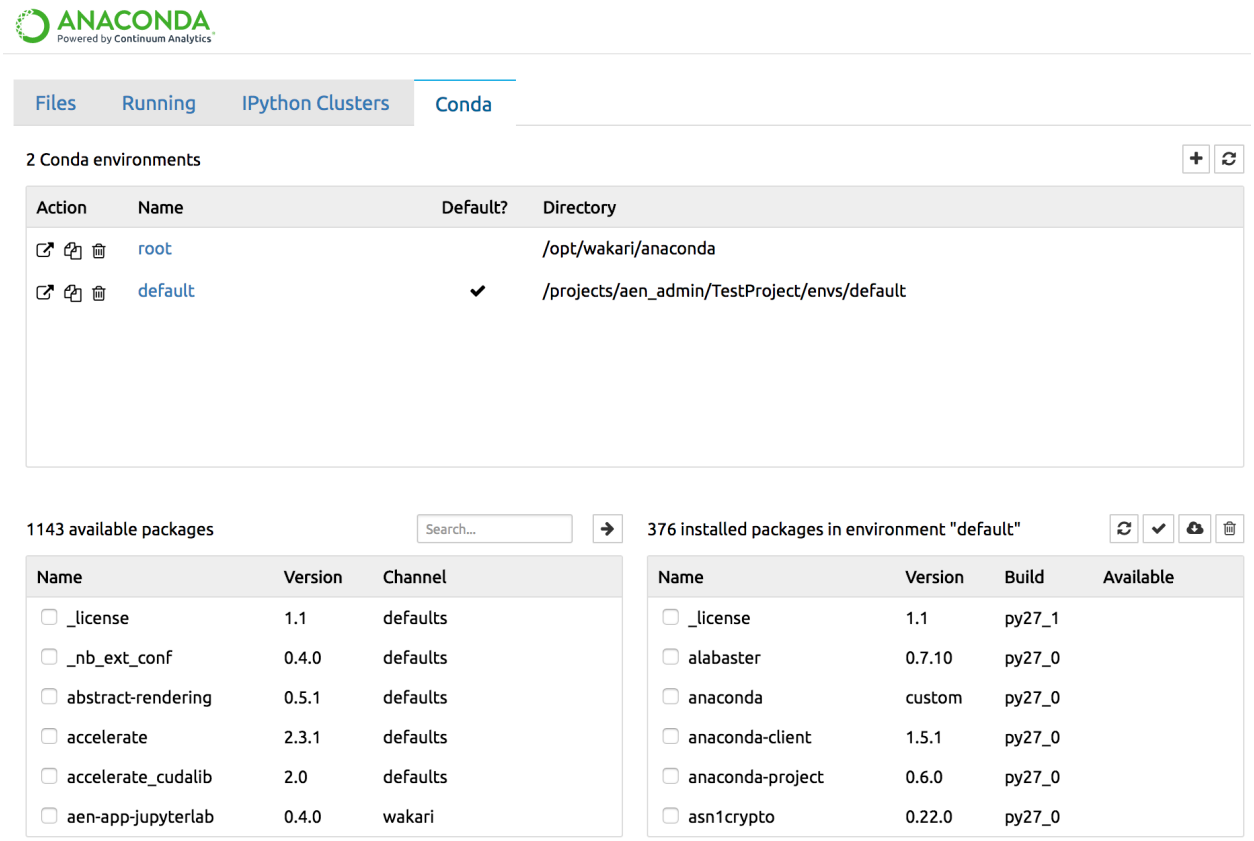
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

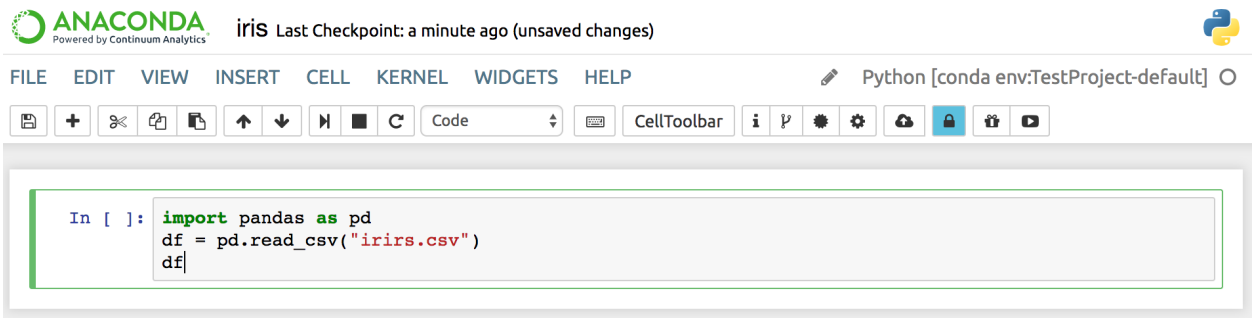
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

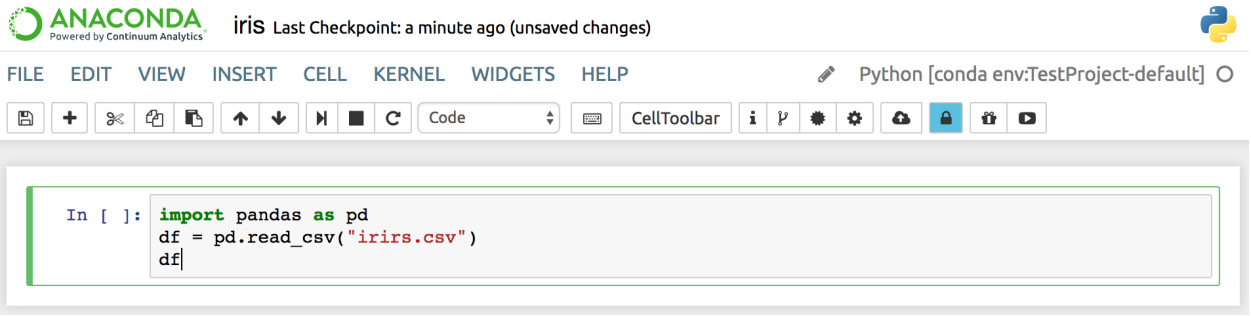
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

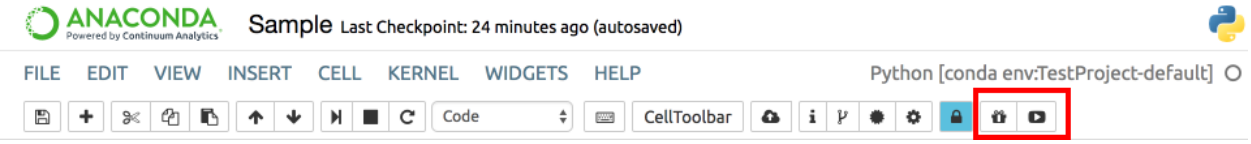
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



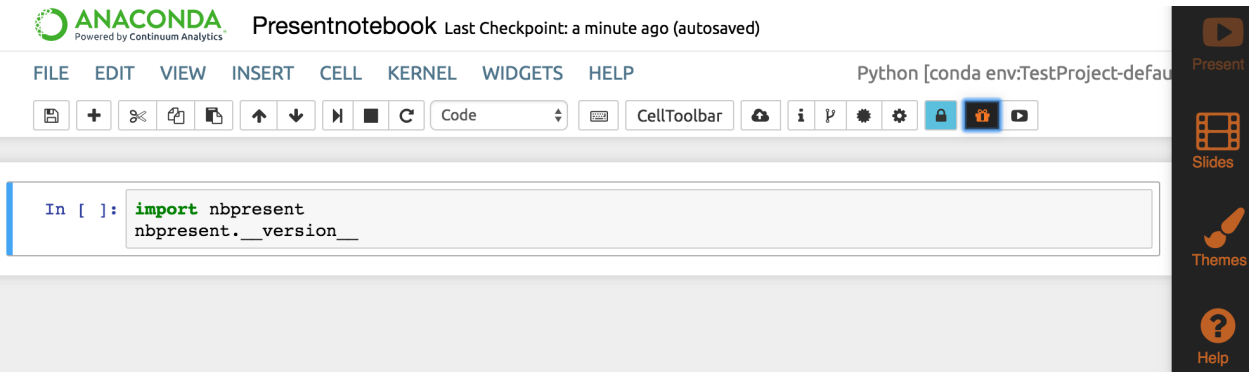
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

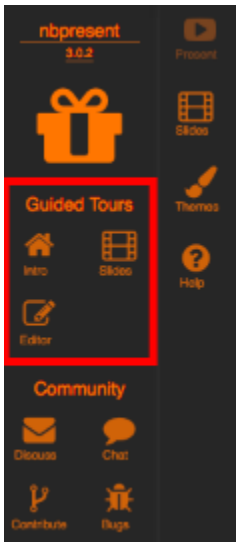


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

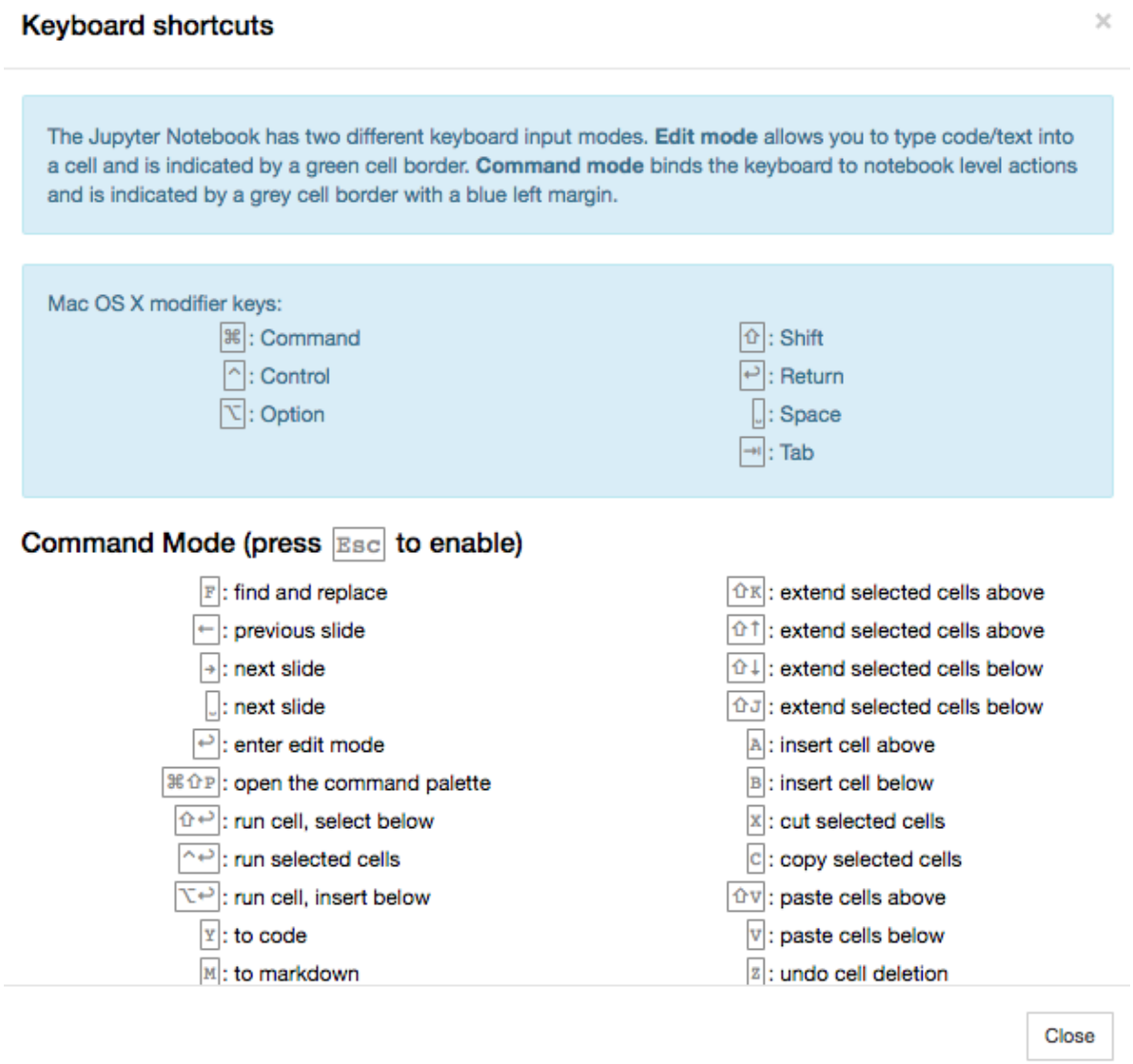
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

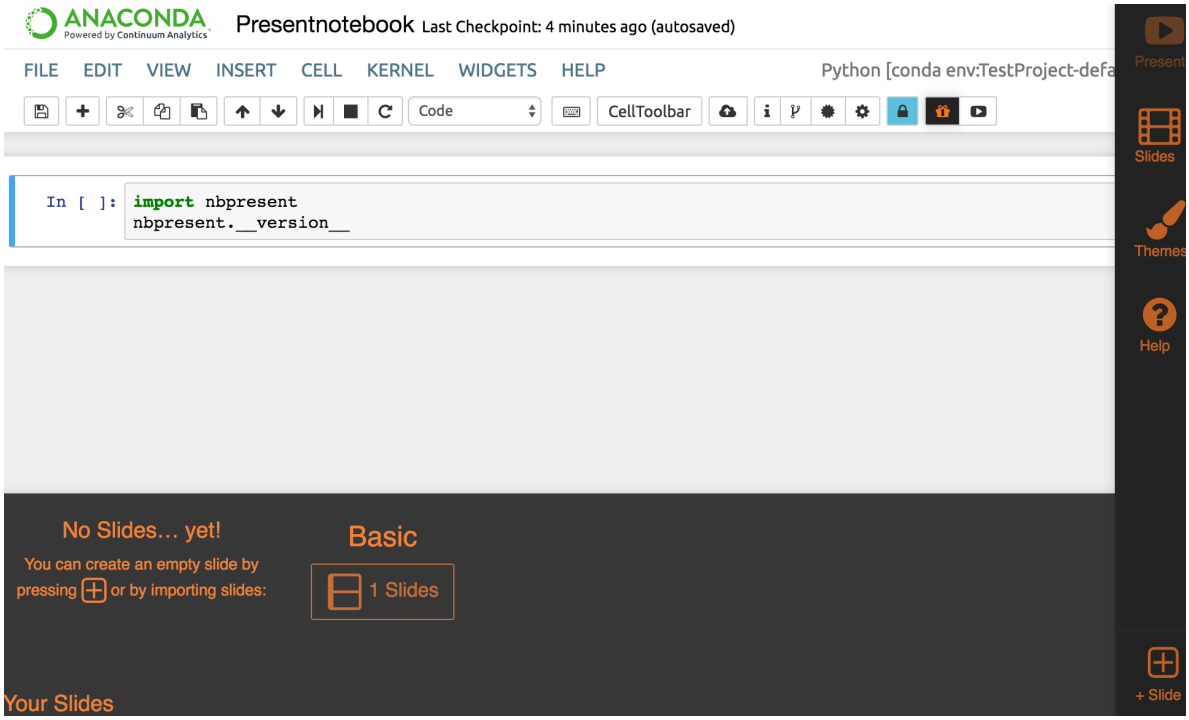
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

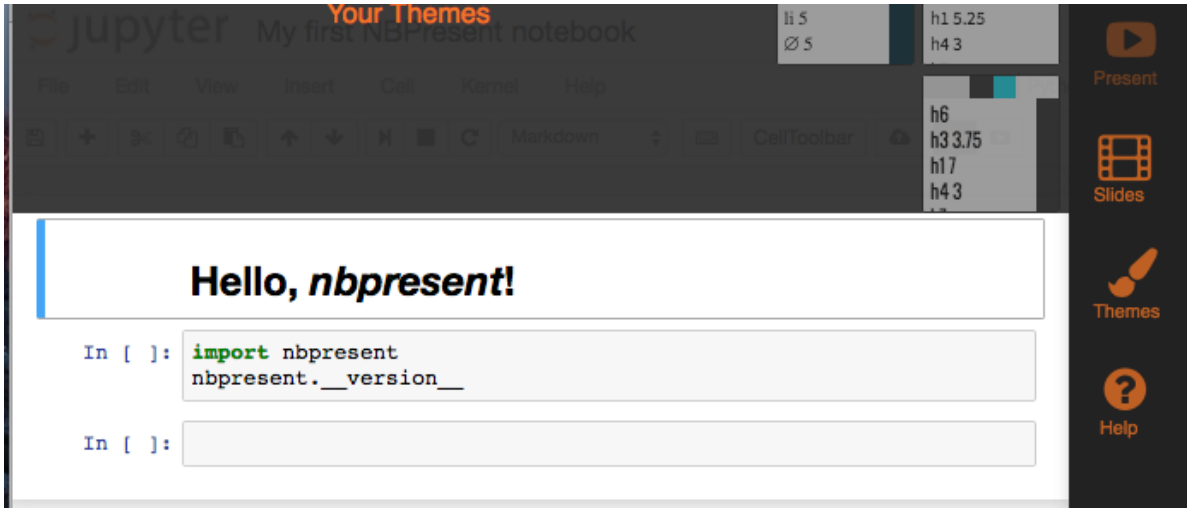
- App Bar—When Authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops Authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any Authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start Presenting, where you can use most Notebook functions with the Theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



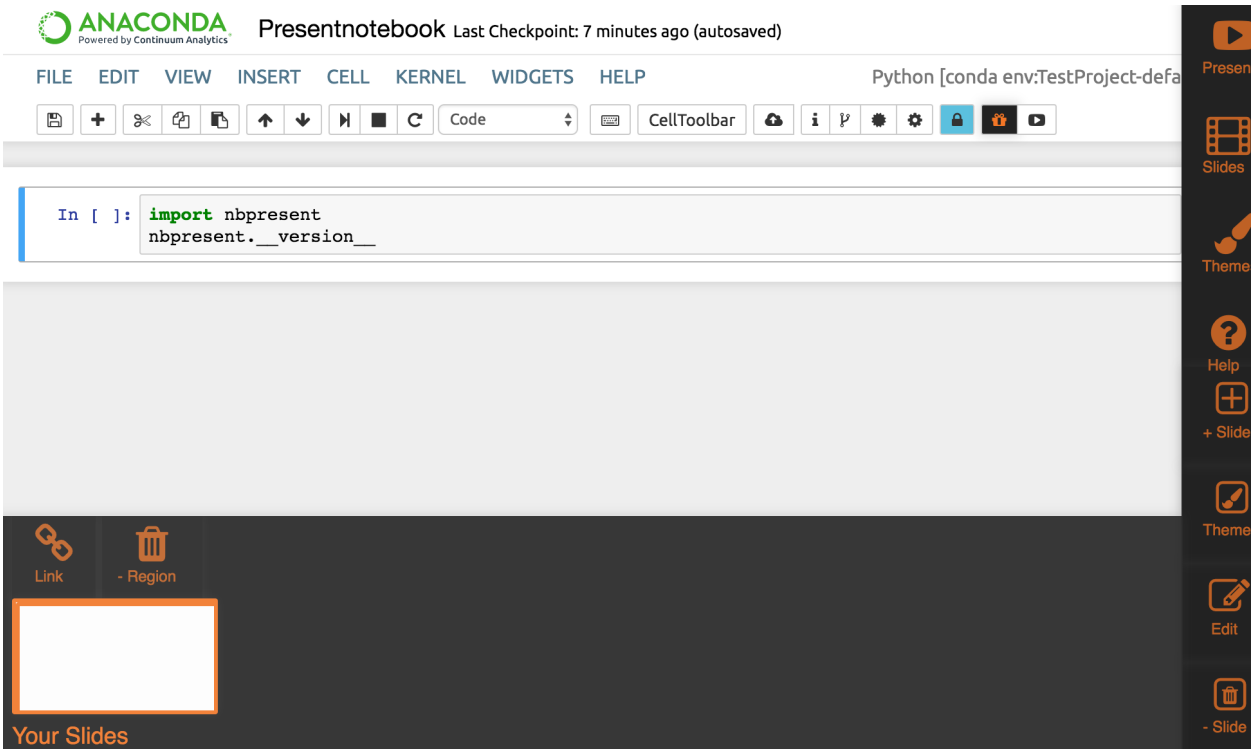
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook .ipynb file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate Help at any time to try other tours, connect with the Present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    - Cell Part: Source (blue)–Source, such as code and Markdown text.
    - Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    - Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    - Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a region and a cell part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

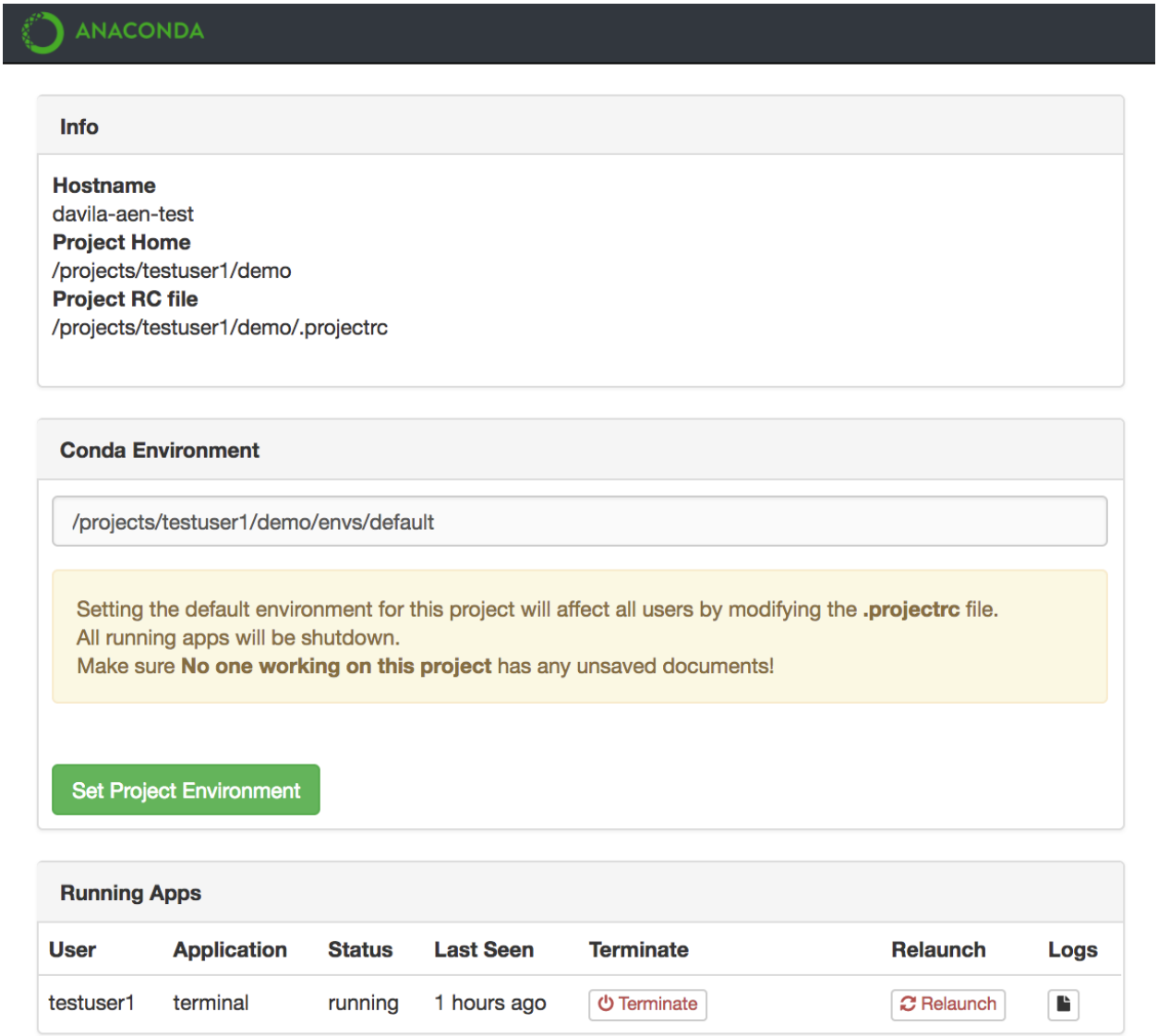
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

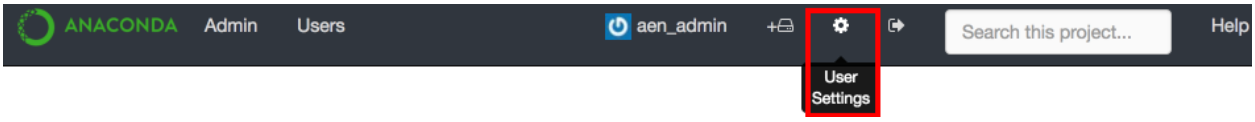
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

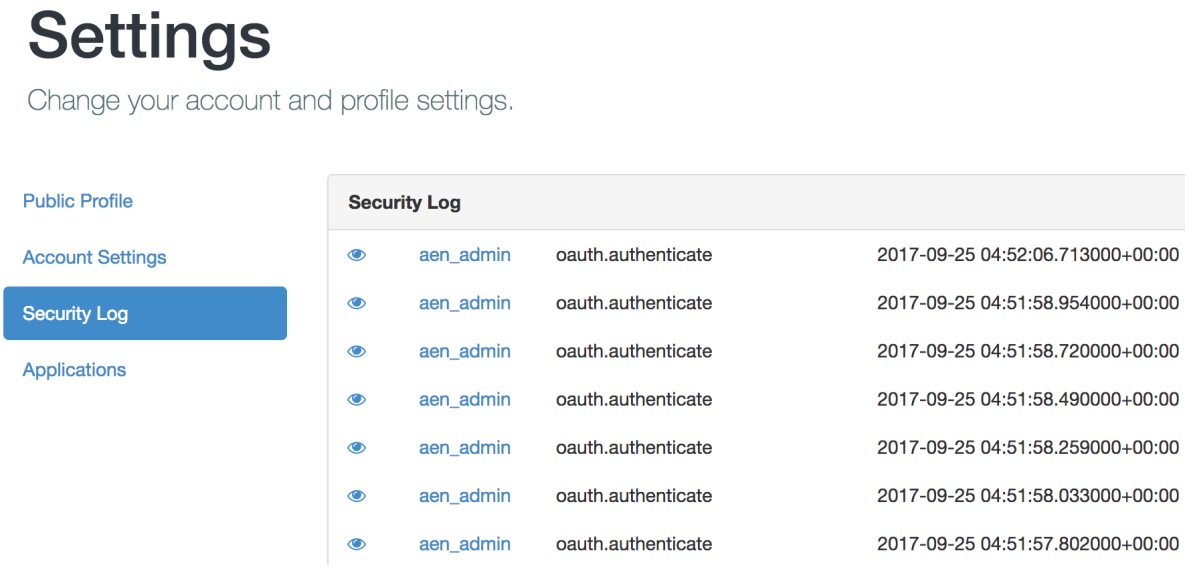
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

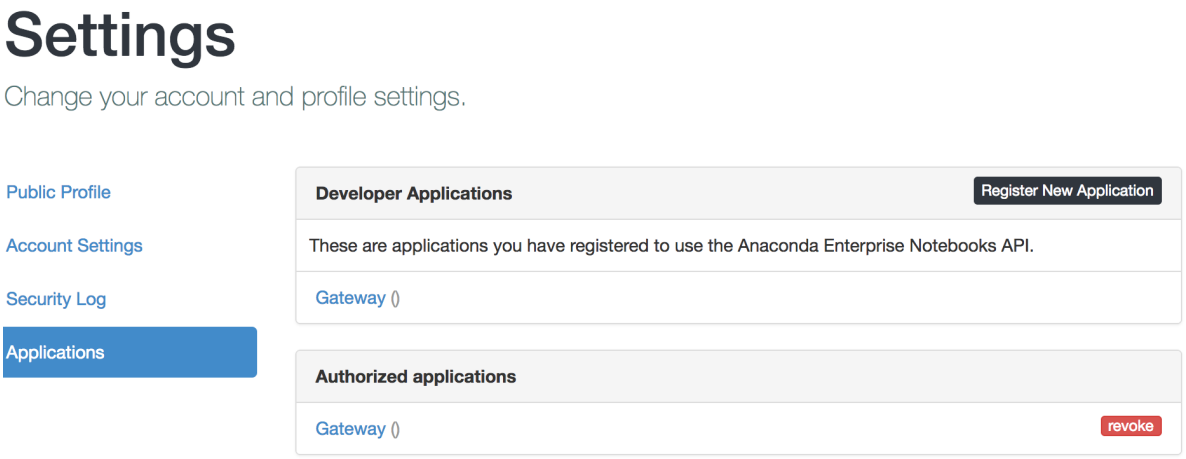


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

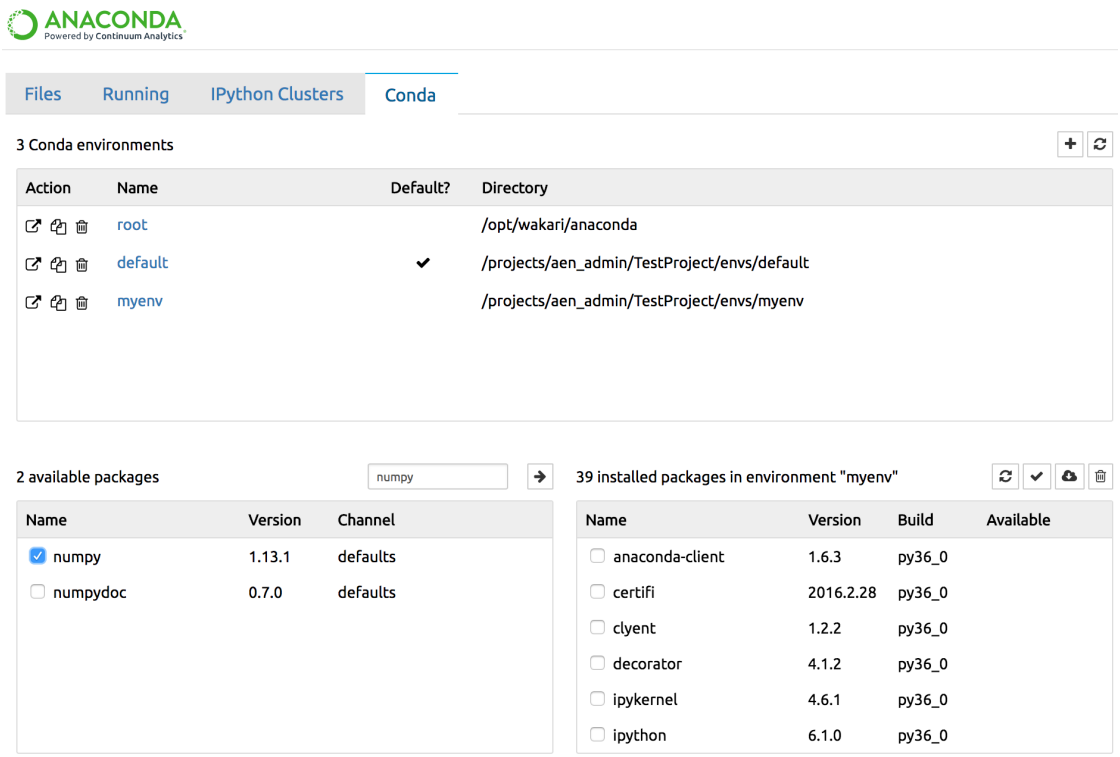
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

```
conda create -n WeatherModel numpy
```

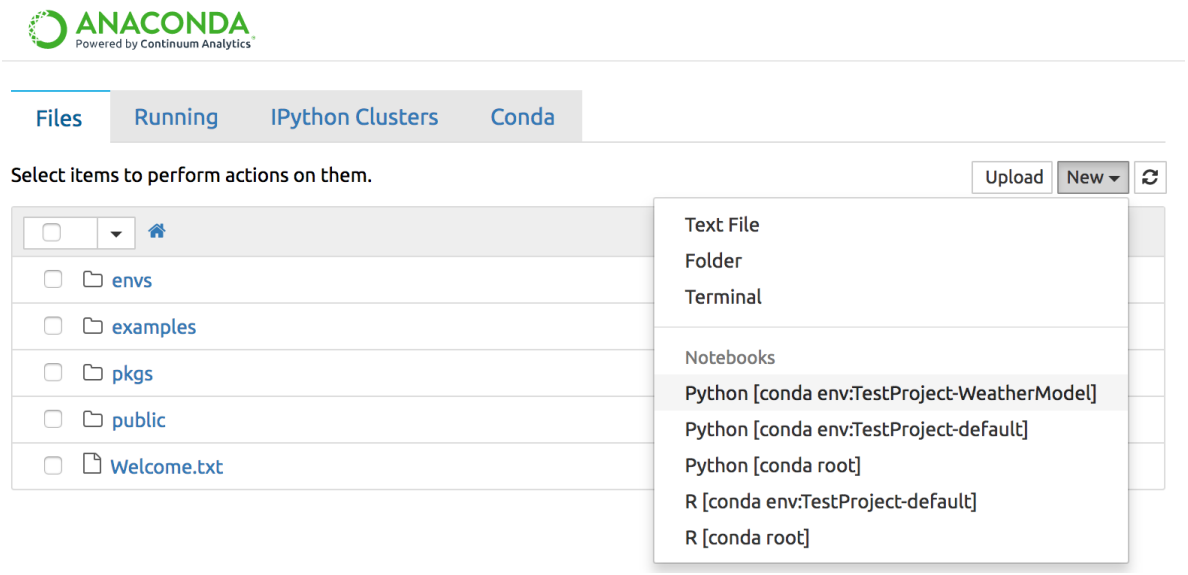
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select Python [conda env:test1-my_env].

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

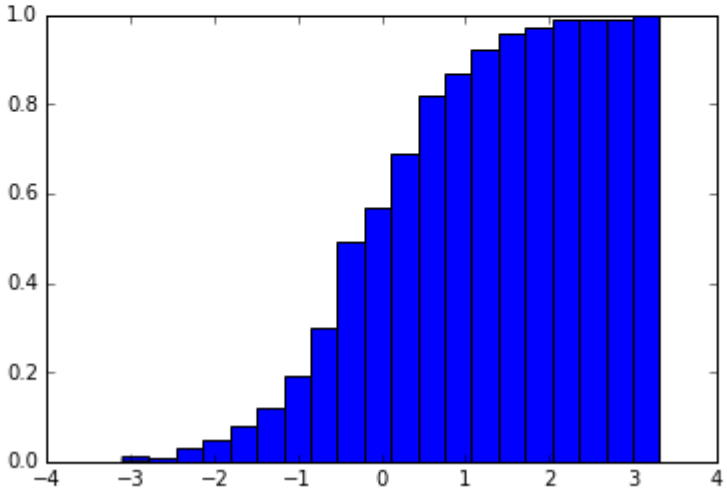
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

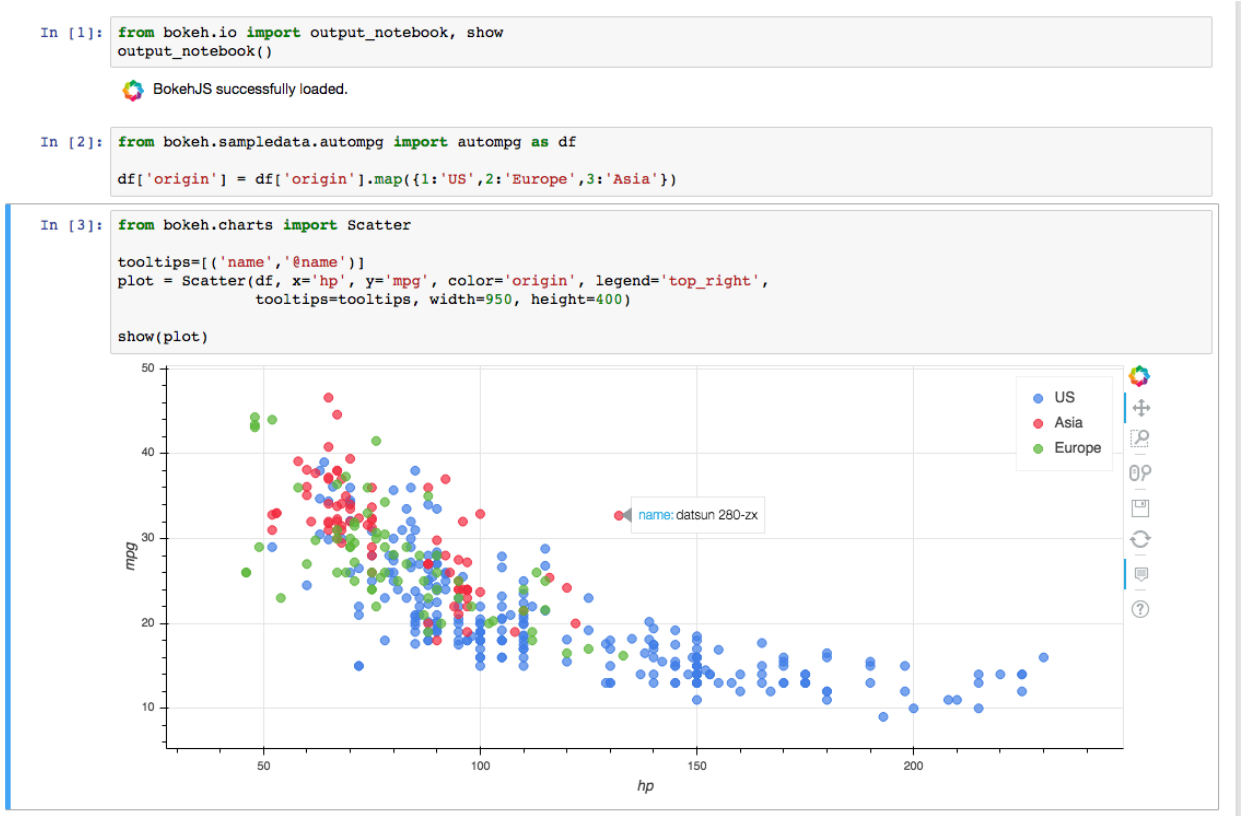
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

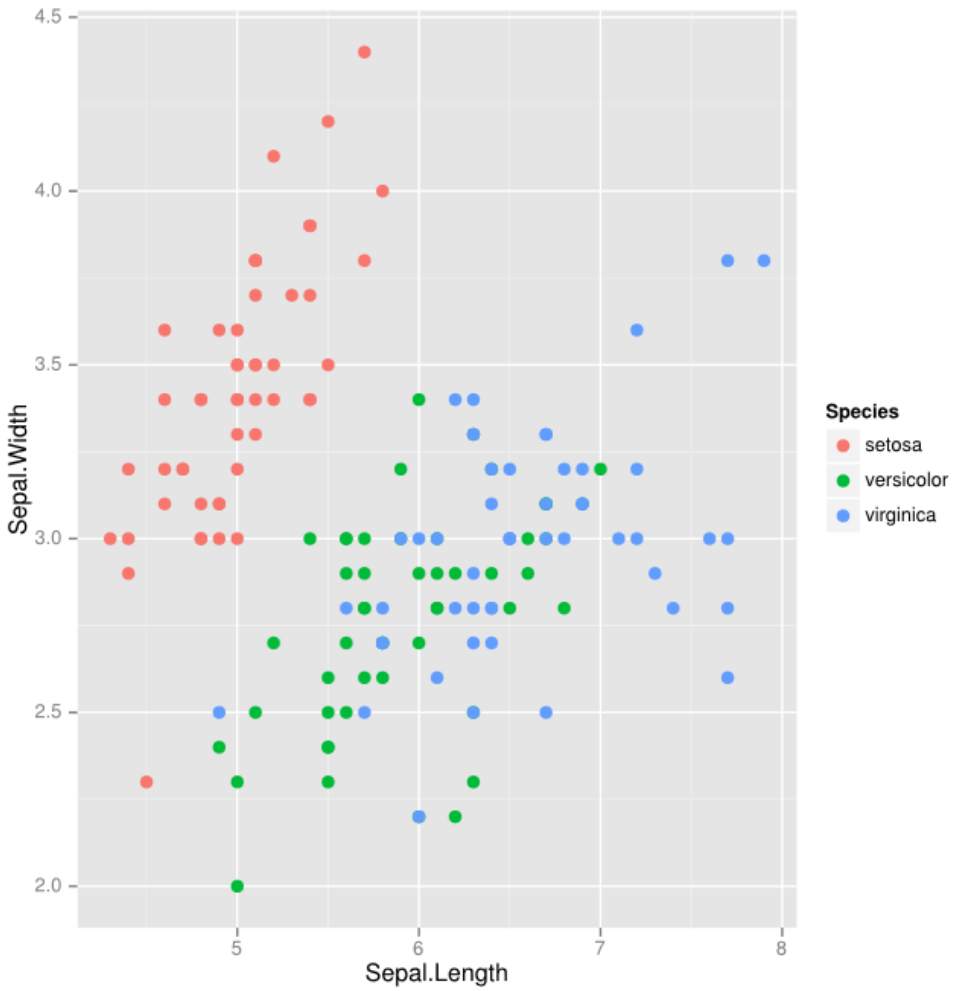
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the $PATH environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

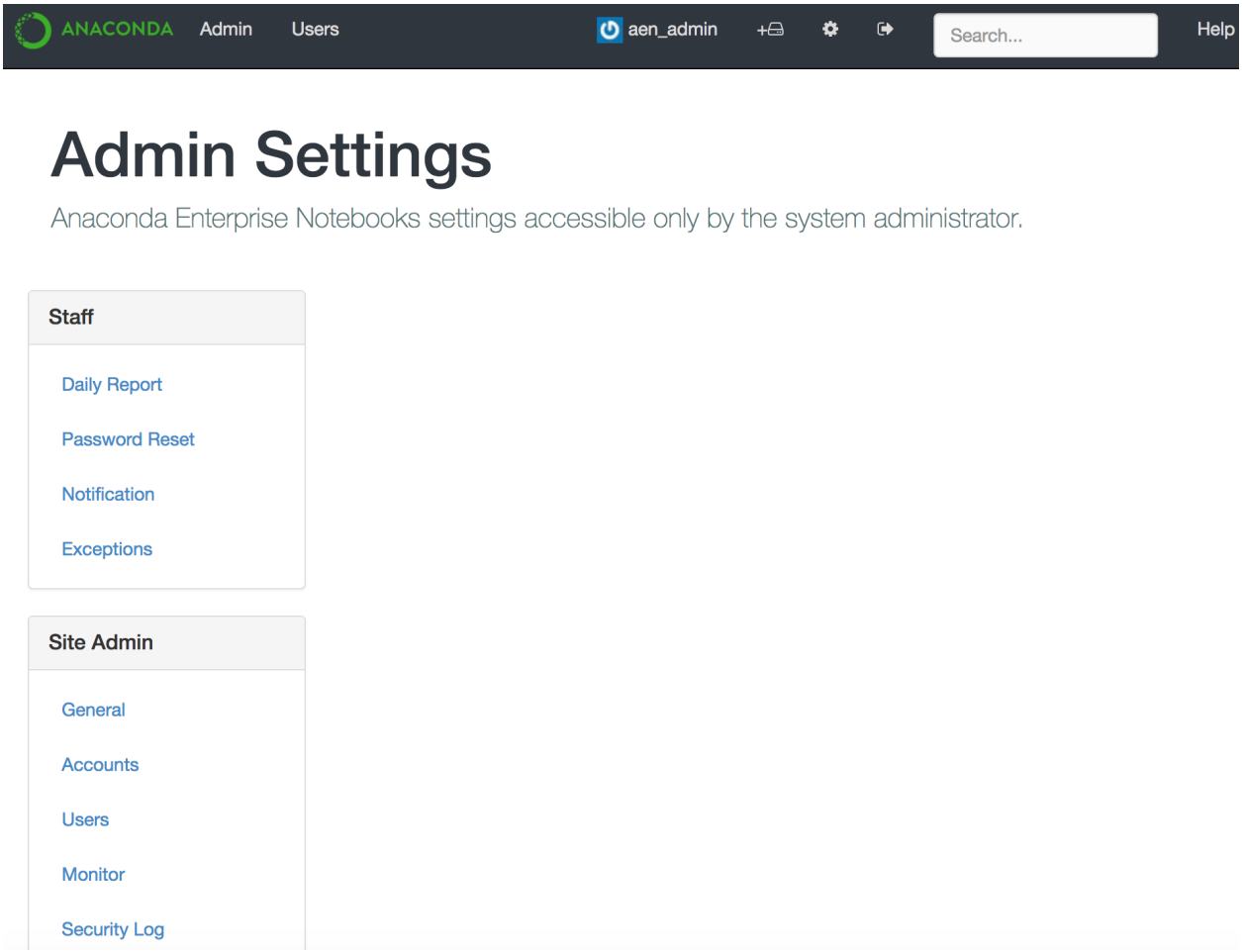
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



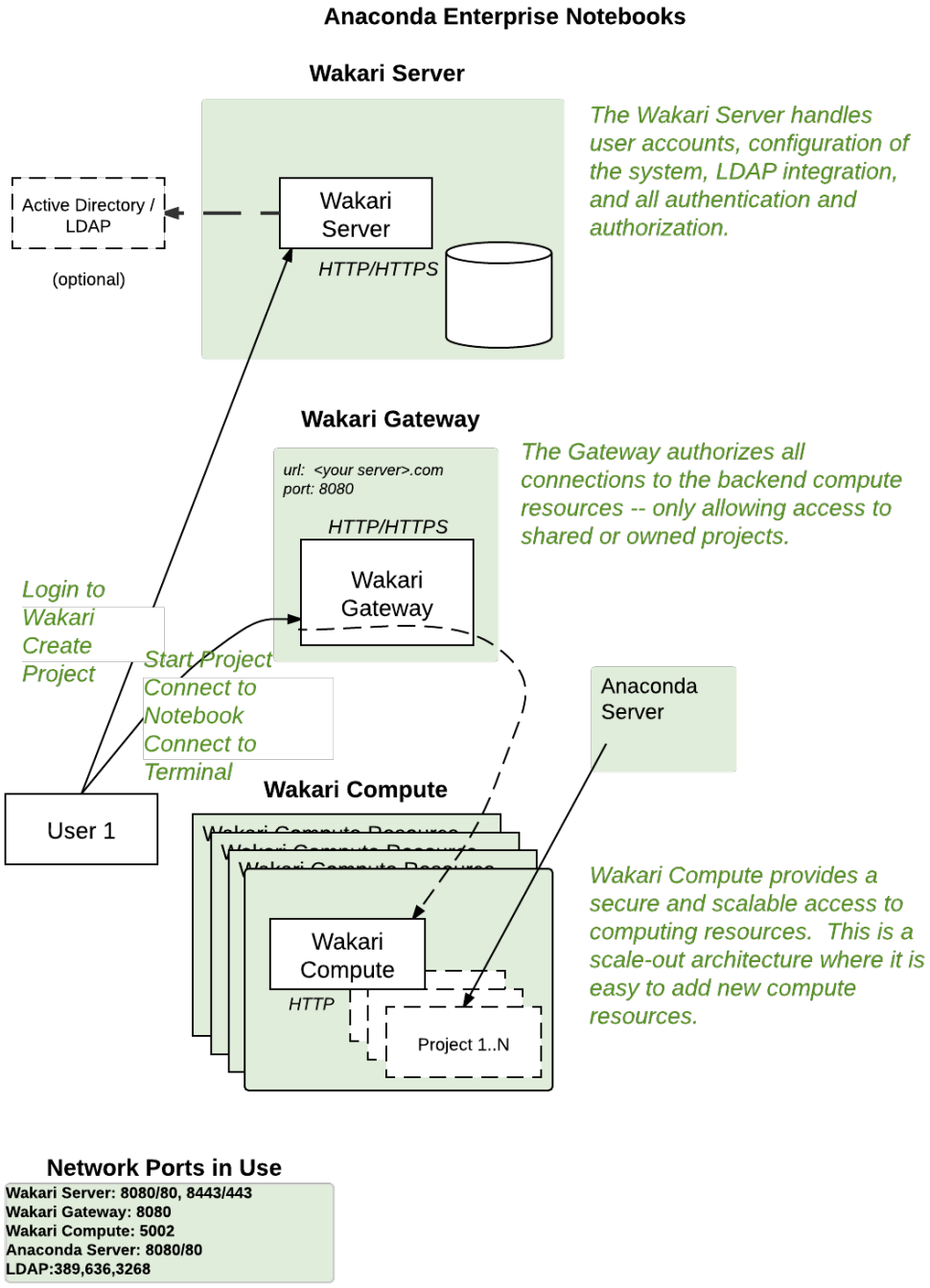
All of the other navigation bar items are the same as for a user account.

Concepts

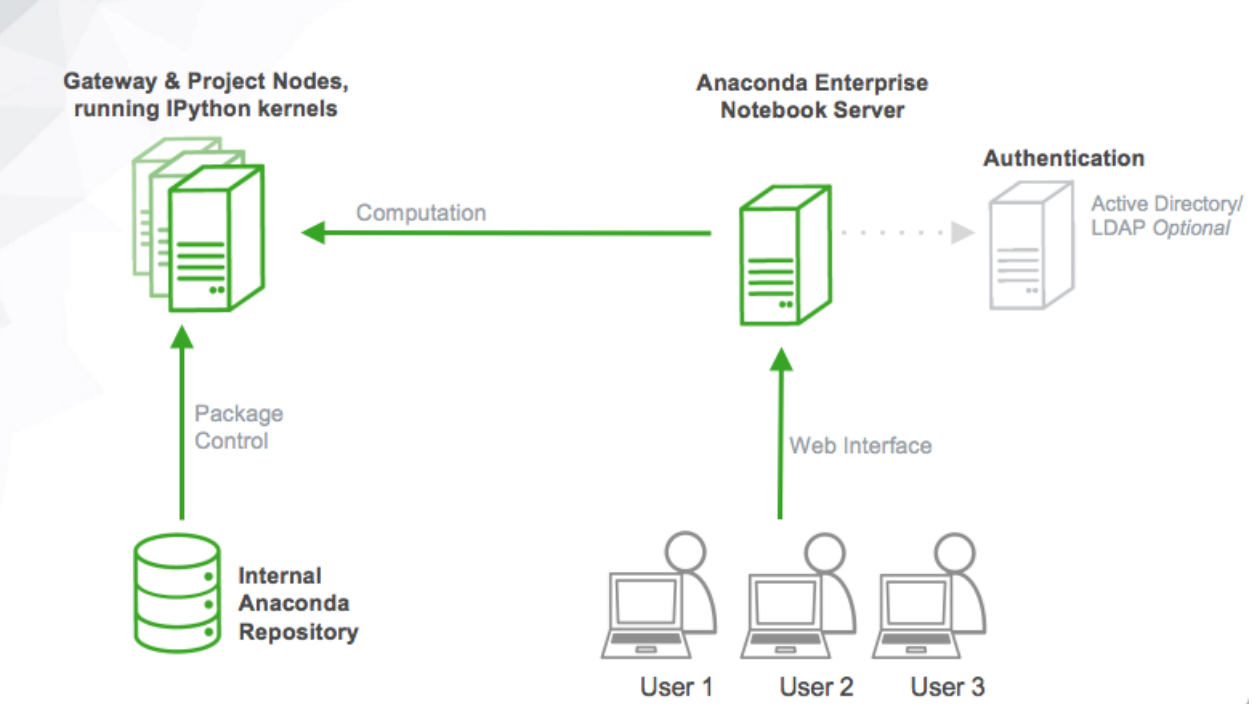
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Organizationally, each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for its internal data persistency. It is typically run on the same host as the server but can also be *installed* on a separate host.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web-process which runs on a high numbered port that only listens on localhost. NGINX is also responsible for static content.

Server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is: `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

Wk-compute loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually wakari or aen_admin.

The Supervisor daemon process is called "supervisord". It runs in the background and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name "default" into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

You can use a new conda environment to test a new version of a package before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, wakari or aen_admin.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Equal to or higher than version 2.6.8 and lower than version 3.0.
  - NGINX—Equal to or higher than version 1.6.2.
  - Elasticsearch—Equal to or higher than version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.3.3-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.3.3-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.3.3-Linux-x86_64.sh
```

NOTE: The current $RPM_CDN server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use *curl* or *wget* to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as `<AEN_SERVER_IP>` or `<AEN_SERVER_FQDN>`, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the AEN_SUDO_CMD environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an AEN_SUDO_CMD entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the *bzip2* package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.6.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.10.2-1.el7.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

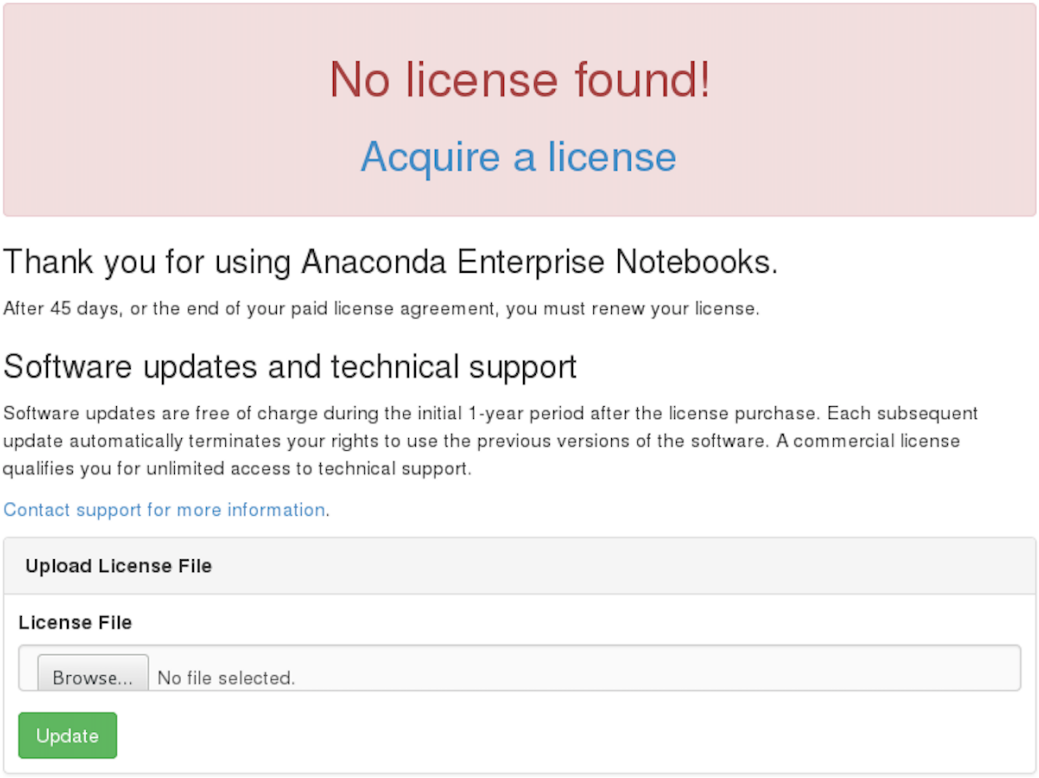
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

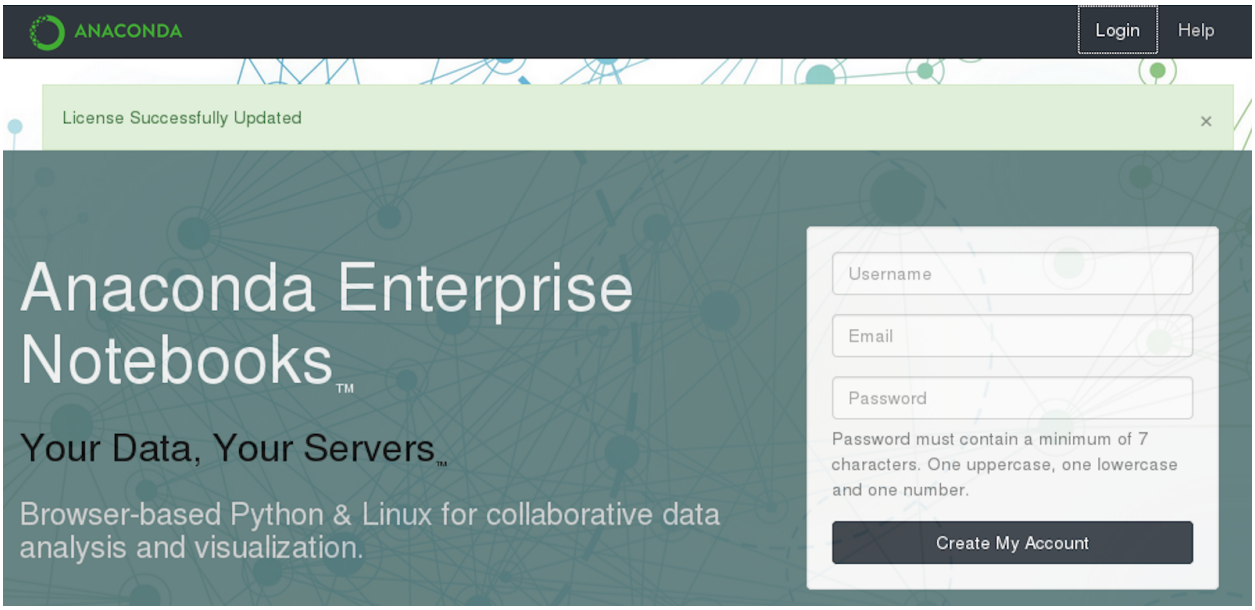
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

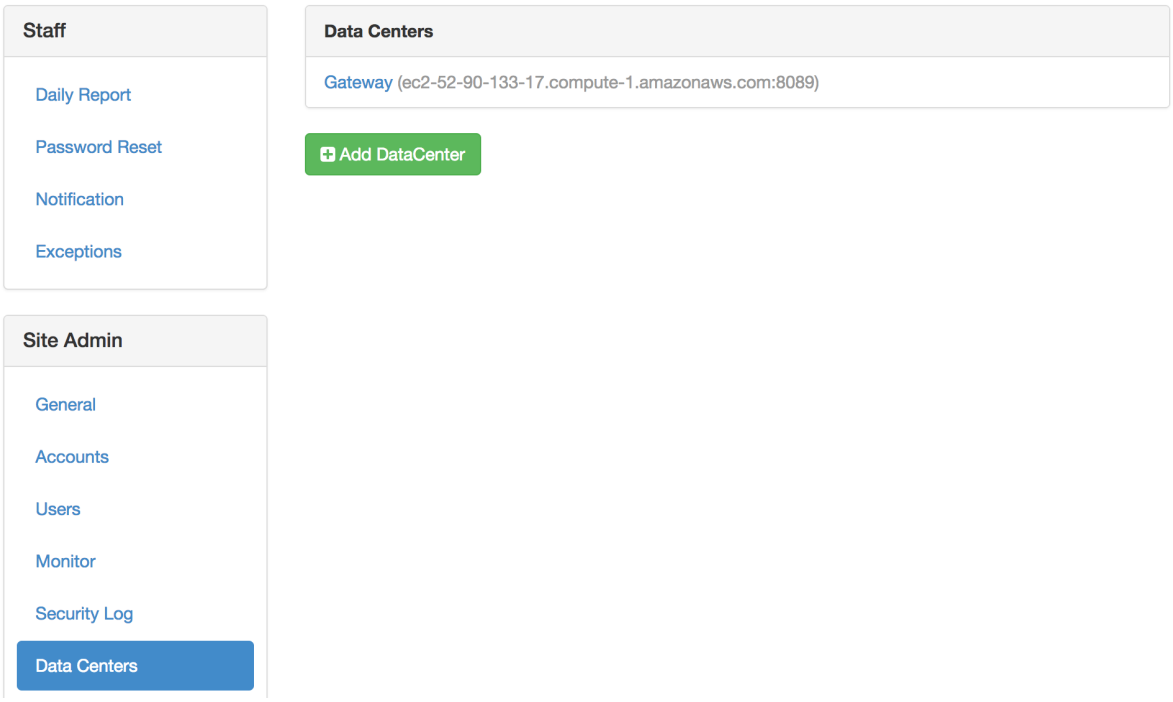
Starting the gateway

Run:

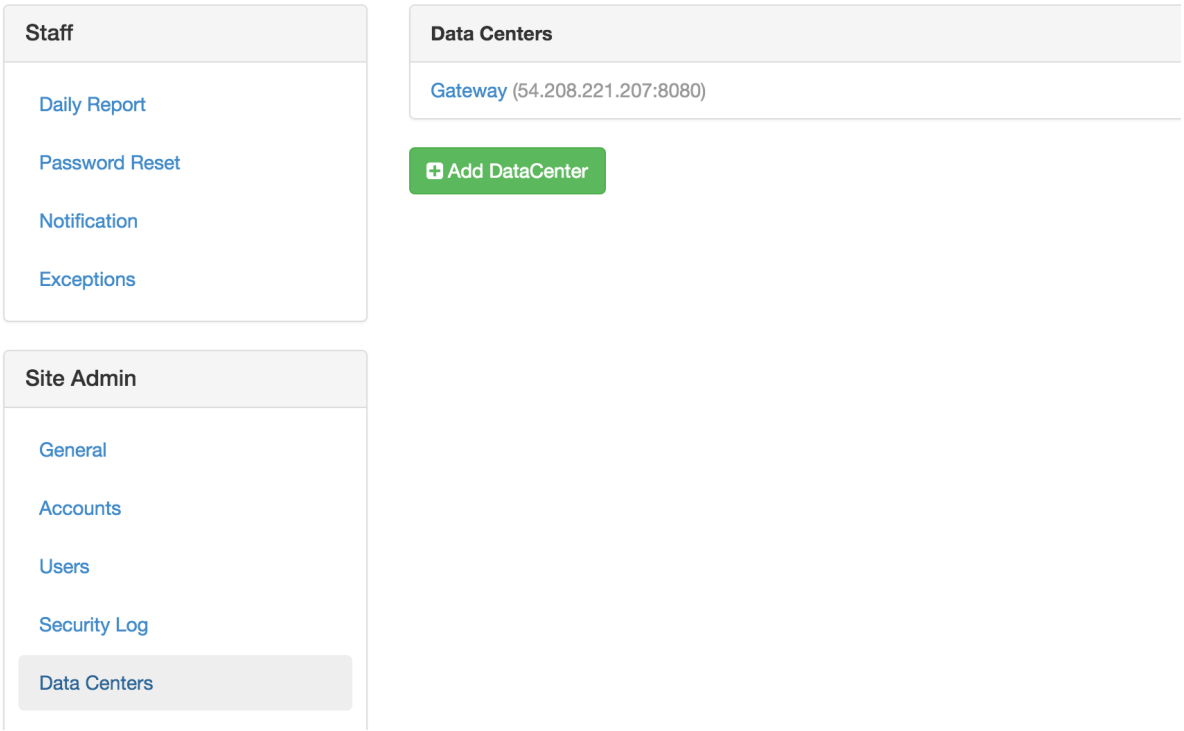
```
sudo service wakari-gateway start
```

Verifying your gateway registration

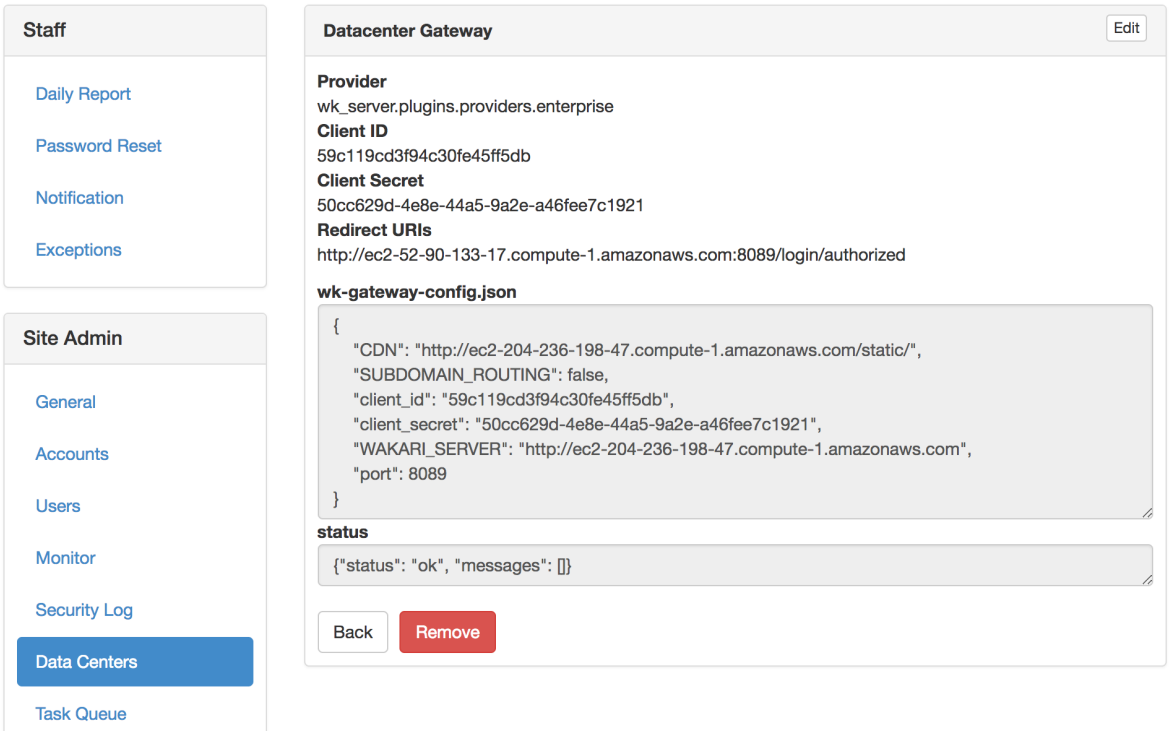
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

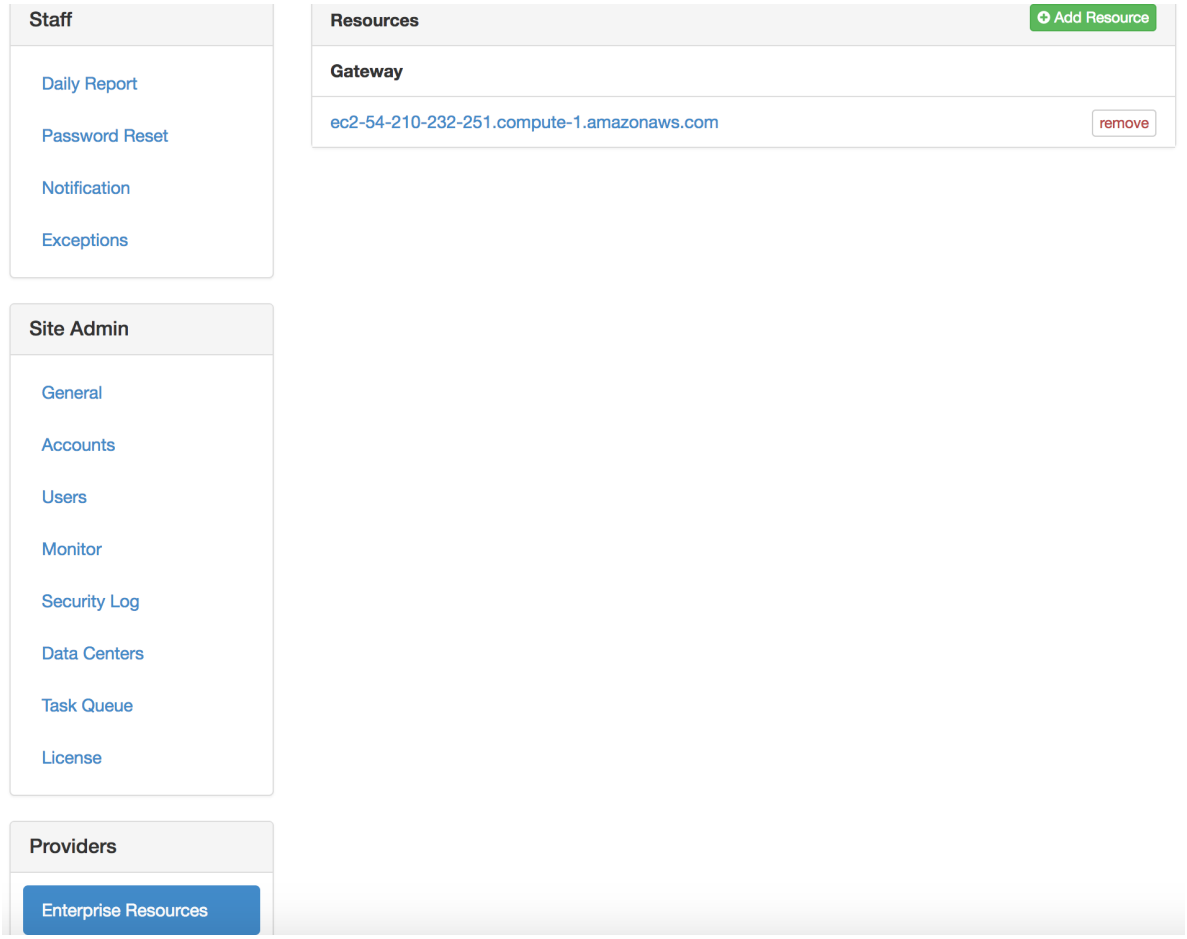
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

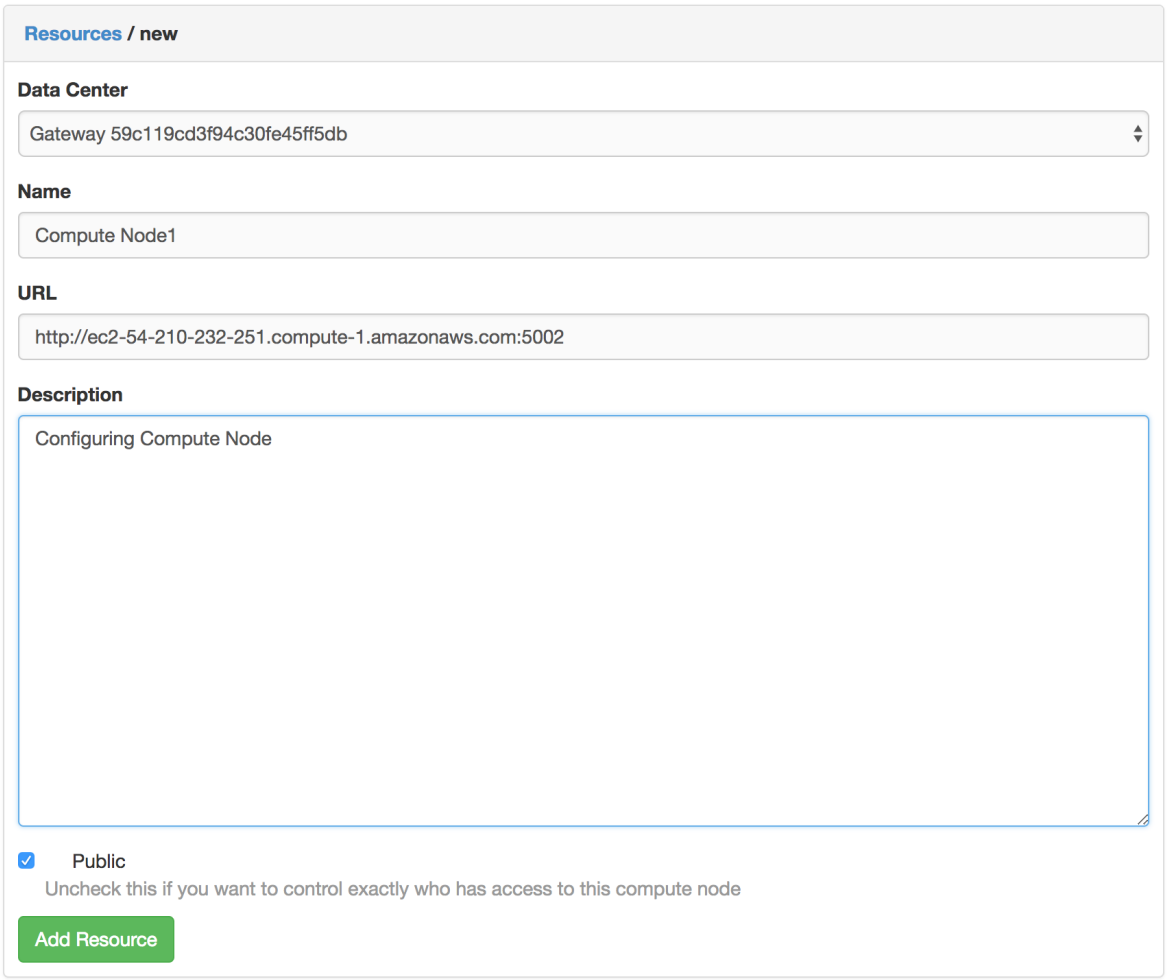
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the AEN_SRVC_ACCT user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda Repository server instead of Anaconda.org.

To configure AEN to use a local on-site Repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.anaconda.com
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with Repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

NOTE: Replace <your Anaconda Repository> with the actual name or IP address of your local Anaconda Repository installation.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 288: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/

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Key	Default	Description
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The Cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
SESSION_COOKIE_SEC	false	This key is automatically set to true when SSL is enabled. It will default to false when SSL is not enabled. Manually changing this value may cause the system to malfunction if it's not configured properly.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some Enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.

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Key	Default	Description
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set uniqueEmail to false, you must drop the existing index in the database. EXAMPLE: If the index name is email_1, run db.users.dropIndex("email_1").

Table 289: Gateway Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
port	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
client_id		The client ID assigned to this gateway by the server during wk-gateway-configure.
client_secret		The Client secret assigned to this gateway by the server during wk-gateway-configure.
httpTimeout	600	Timeout in seconds. The default is 10 minutes to allow project creation.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
https		Enable SSL encryption. For more information, see *Configuring SSL*.
- key		A https subkey–Path to gateway key.
- cert		A https subkey–Path to gateway cert.
- ca		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
- passhphrase		A https subkey–Passphrase required to decrypt SSL certs.

Table 290: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.
emptyDefaultChanne	true	A boolean setting. When true AEN sets default_channels to be an empty list on the project's .condarc preventing the search of packages from the free channel. If you set this option as false, and if you already started a project with this setting as true, you will need to modify the existing project's .condarc and remove the default_channels: [] line.

Table 291: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server.plugins.providers.enterprise"]	A list of compute provider classes.
MONGO_ACTION_LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM_EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 292: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 293: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

```
"httpTimeout": 600
```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda environment directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

```
"projectRoot" : "/nfs/storage/services/wakari/projects",
```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the identicalGID key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Authenticating with PAM

To configure AEN to authenticate with PAM, you need to have LDAP in place and pre-populated with your users. With LDAP, pam does not require to read /etc/shadow and it can authenticate successfully without root privileges.

NOTE: PAM on the linux machine needs to be tied to LDAP (pam_ldap). You cannot use PAM with local unix accounts because /etc/shadow is only readable by the root user, but pam_ldap can authenticated against LDAP (non-root).

Steps

1. Stop the wakari server:

```
sudo service wakari-server stop
```

2. update the configuration file `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` with the PAM authentication method. Change the entry for the line `"accounts":` with:

```
"accounts": "wk_server.plugins.accounts.pam",
```

3. Restart the wakari server:

```
sudo service wakari-server start
```

4. In your browser navigate to Anaconda Enterprise Notebooks and attempt to login as a PAM-based user – create and start a project, then open a Jupyter Notebook.
5. Logout then login as an administrator and go to the *Admin* view. Attempt to list users.

Testing

You can test PAM directly from the Python CLI

```
su - $AEN_USER/opt/wakari/wakari-server/bin/python
```

```
p = pam.pam()
p.authenticate("<username>", "<password>")
True
```

Troubleshooting

If the server throws an `import error` for the pam module, please make sure that the `python-pam==1.8.2` module is installed. If the `.condarc` file includes the `wakari` channel then `python-pam==1.8.2` will be installed automatically.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: ALL
```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

```
"MANAGE_ACCOUNTS": false,
```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

   ```
   "AEN_SUDO_CMD": "/path/to/alternative/sudo",
   ```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
   ```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

   ```
   "AEN_SUDO_SH": "/path/to/gatekeeper"
   ```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.

3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.

4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.

5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.

8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

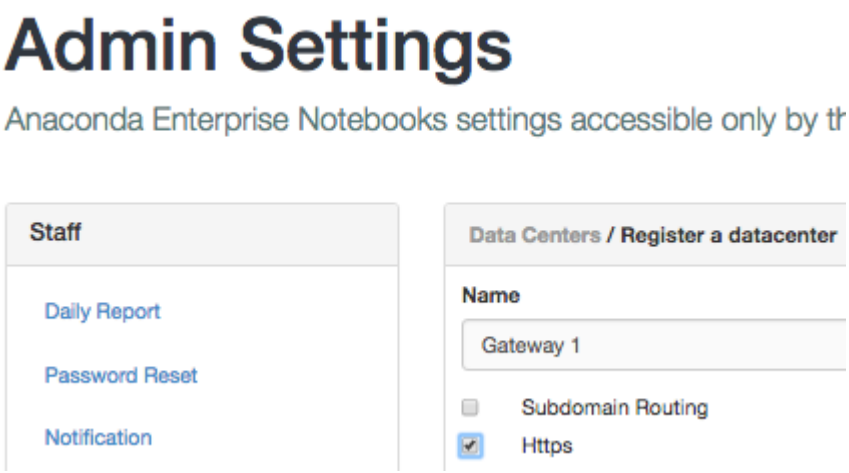
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

   NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt"
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

   NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

   EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

```
{
EXISTING_CONFIGURATION,
"SECRET_KEY": "<repo signing secret>",
"REPO_LOGIN_URL":
   "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
}
```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

```
{
EXISTING_CONFIGURATION,
"accounts": "wk_server.plugins.accounts.repo",
}
```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The jupyter-contrib-nbextensions extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in */opt/wakari/wakari-compute/share/jupyter/kernels/*.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel without the user .ipython space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The pyspark.sh script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: *.local/share/jupyter/kernels/pyspark/*. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following kernel.json file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace "<username>" with the correct user name and "<project_name>" with the correct project name.

You may choose any name for the 'display_name'.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"
```

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```
# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Enabling server-side session management

By default, AEN uses client-side session management which is vulnerable to session replay attacks if an attacker manages to steal a valid session ID of a user.

To enable server-side session management:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "USE_SERVER_BASED_SESSIONS": true,
   ```

2. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

Terminate terminal sessions on logout

By default, when a user logs out, their open terminal sessions will remain active.

To disable this behavior:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

2. Modify the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

3. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

4. Restart the AEN gateway service:

   ```
   sudo service wakari-gateway restart
   ```

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.3.3 from 4.3.2 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.3.2 upgrade instructions*
- *AEN 4.3.1 upgrade instructions*
- *AEN 4.3.0 upgrade instructions*
- *AEN 4.2.2 upgrade instructions*
- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

4. Update `.condarc` files:

`/opt/wakari/miniconda/.condarc` should be updated with the following content:

```
channels:
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults

create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
```

and `/opt/wakari/anaconda/.condarc` should be updated with the following content:

```
channels:
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults
create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
auto_update_conda: false
```

NOTE: Both contents are similar but different ones, be sure to update them as indicated.

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

   NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                             \
                 wakari-enterprise-server-conf-update=2.0.13
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

   Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

   AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

   Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.
9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.13
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

```
ps aux | grep wakari-indexer
```

   NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

   Terminate any remaining `wakari-indexer` processes:

```
sudo killall wakari-indexer
```

   NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

```
ps aux | grep wk-app-gateone
ps aux | grep wk-app-workbench
ps aux | grep wk-app-viewer
ps aux | grep wk-app-terminal
ps aux | grep jupyter-notebook
```

   NOTE: If you stopped all the projects, you will not see any AEN app processes running.

   Terminate any remaining AEN application processes by running one or more of the following:

```
sudo killall wk-app-gateone
sudo killall wk-app-workbench
sudo killall wk-app-viewer
sudo killall wk-app-terminal
sudo killall jupyter-notebook
```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

```
channels:
  - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults
create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
auto_update_conda: false
```

   NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade *Anaconda* in the root environment:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda geotiff --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda iopro --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda libthrift --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda basemap --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
             -p /opt/wakari/anaconda              \
             --file aen-anaconda-update-4_3_3
popd
```

5. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                -p /opt/wakari/wakari-compute        \
                --file aen-compute-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                --no-deps                            \
                -p /opt/wakari/wakari-compute        \
                wakari-enterprise-compute-conf-update=2.0.17
popd
```

NOTE: When upgrading the wakari-compute environment, you may see *ImportError* warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

6. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

7. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

8. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

9. Install necessary dependencies:

   NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

   NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

10. Start the compute service:

```
sudo service wakari-compute start
```

11. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

12. Restart the AEN Server with:

```
sudo service wakari-server restart
```

13. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4.3.3
popd
```

   To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.3
```

(continues on next page)

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```
sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4.3.3
popd
```

NOTE: Replace <USER> with the user's name. Replace <PROJECT> with the project name.

NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

NOTE: These commands update packages listed in `aen-anaconda-update-4.3.3` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

```
service wakari-server stop
```

2. Stop MongoDB:

```
service mongod stop
```

3. Remove AEN server software, AEN database files and NGINX configuration:

```
rm -Rf /opt/wakari/wakari-server
rm -Rf /opt/wakari/miniconda
rm -Rf /var/lib/mongo/wakari*
rm -Rf /etc/nginx/conf.d/www.enterprise.conf
```

NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

```
service mongod restart
service nginx restart
```

5. Check for any outstanding server processes and stop them:

```
ps -ef | grep -e wakari-server -e wk-server
```

6. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

7. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

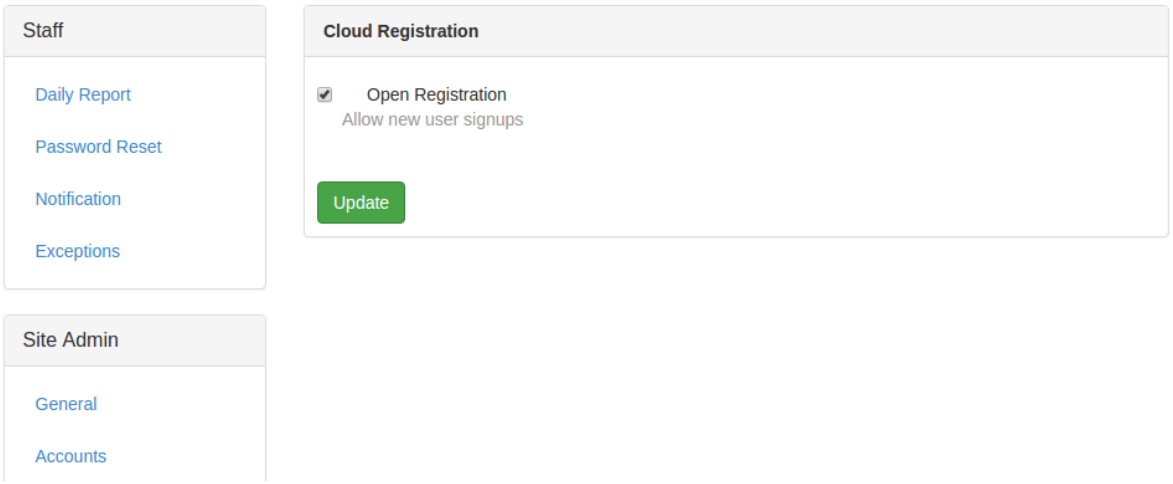
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

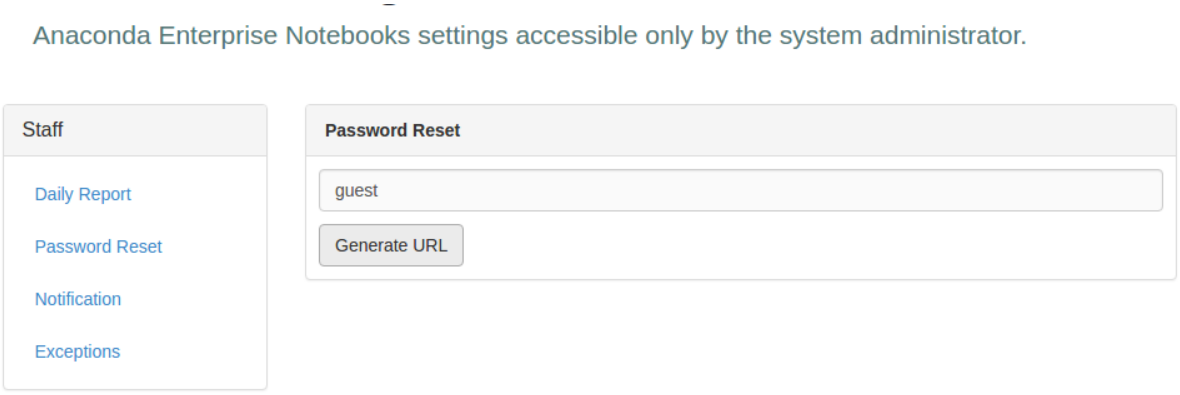
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.
2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

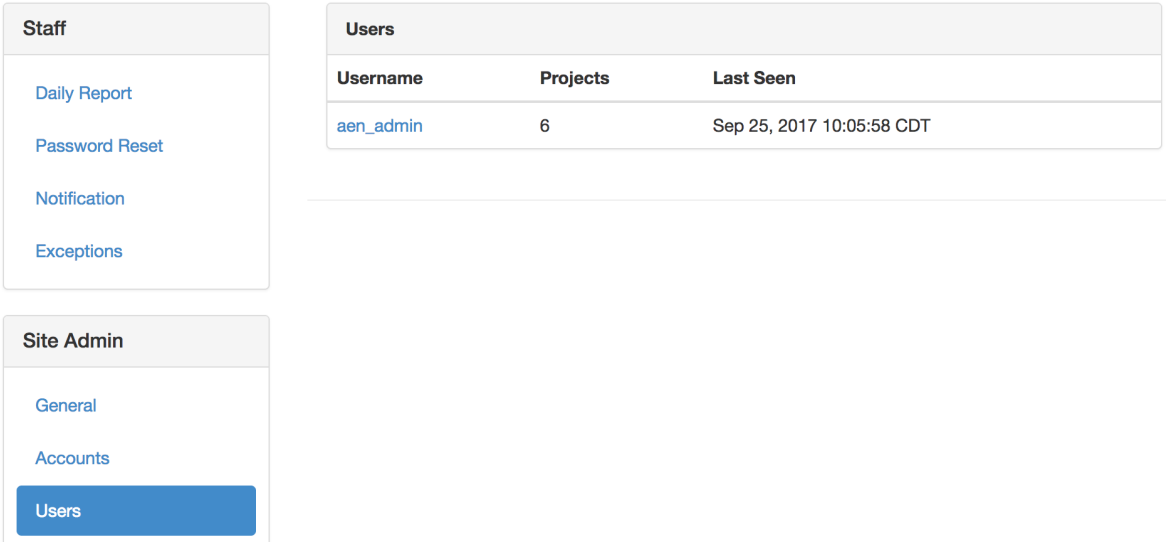
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

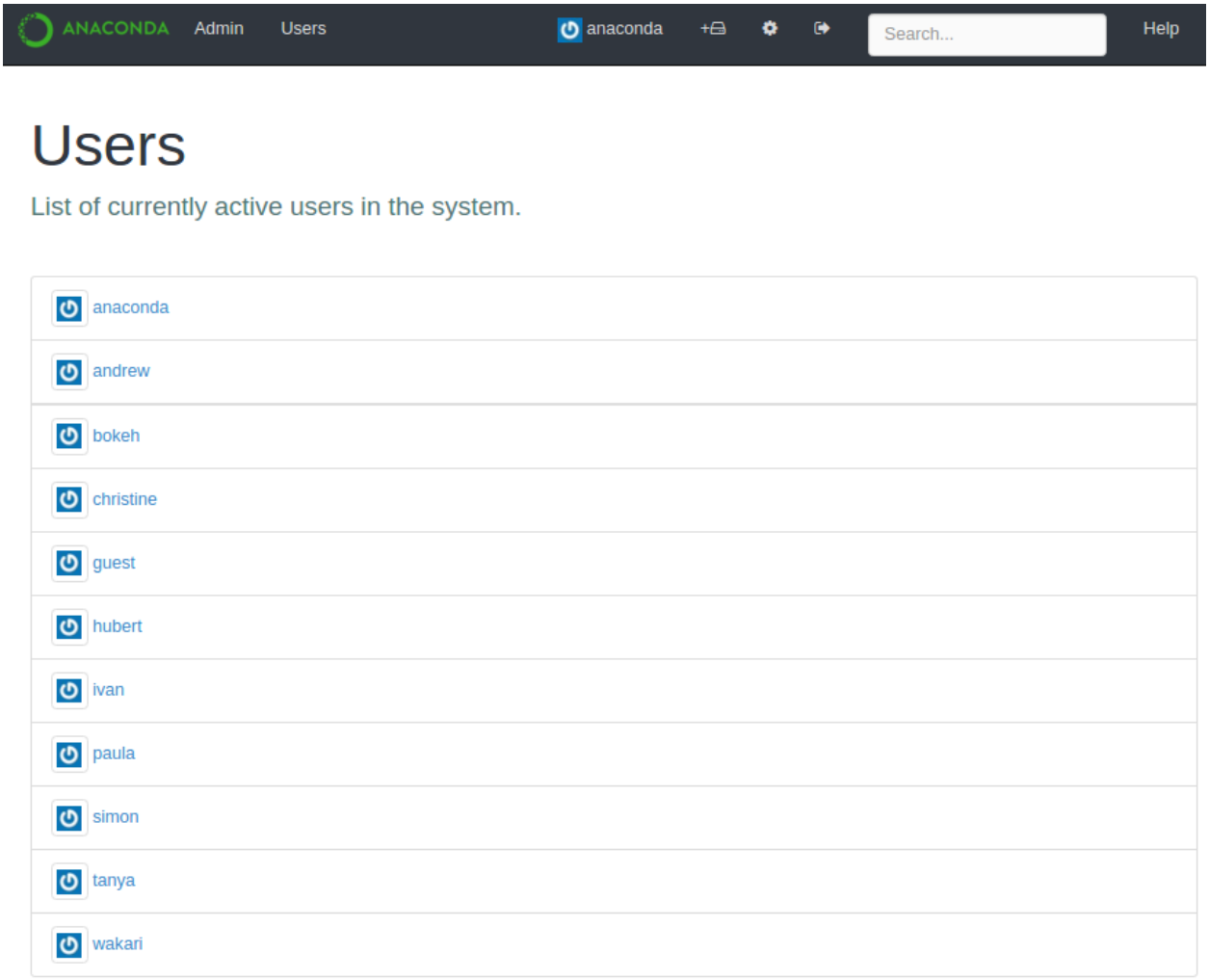
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

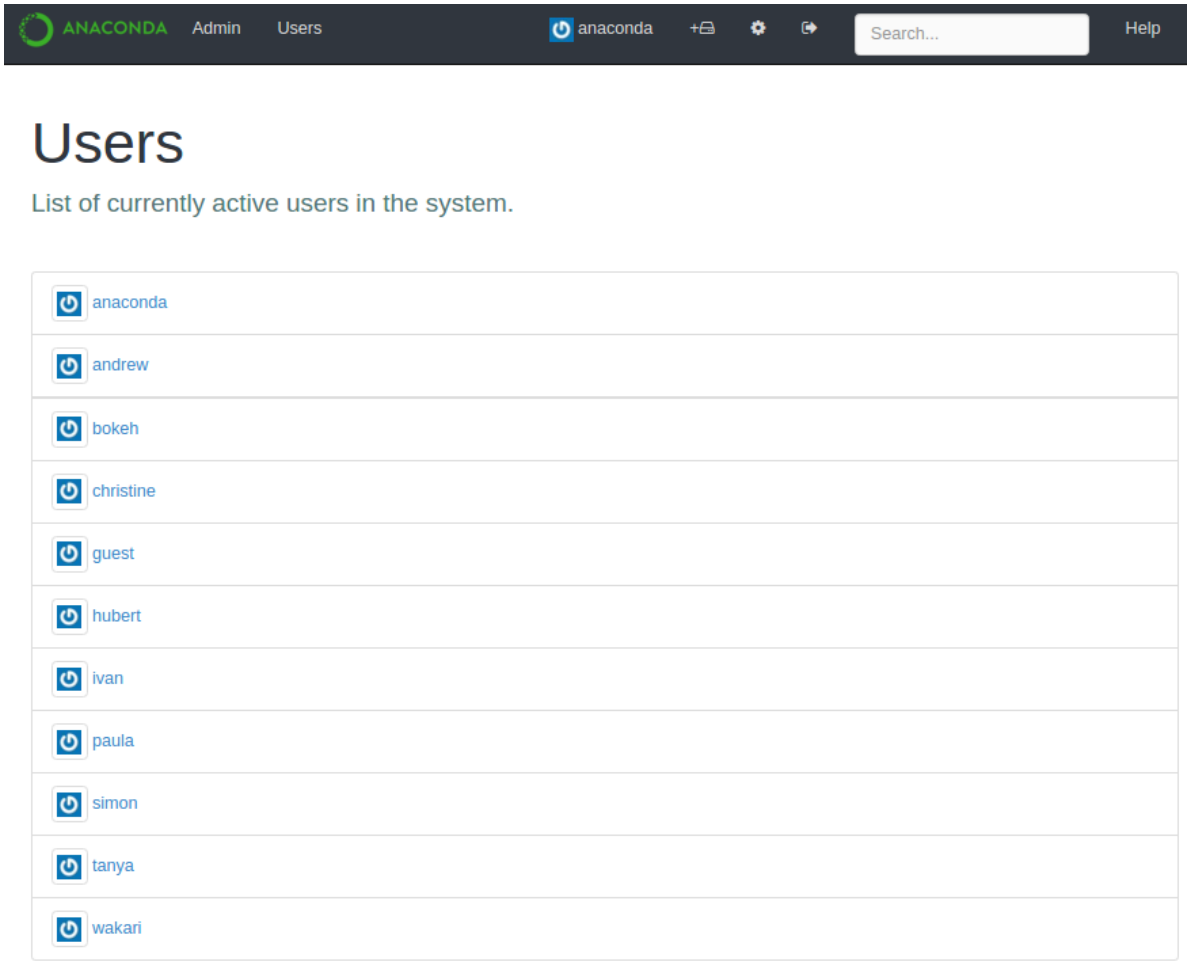


Click a username to open the user's profile page.

Viewing a user profile

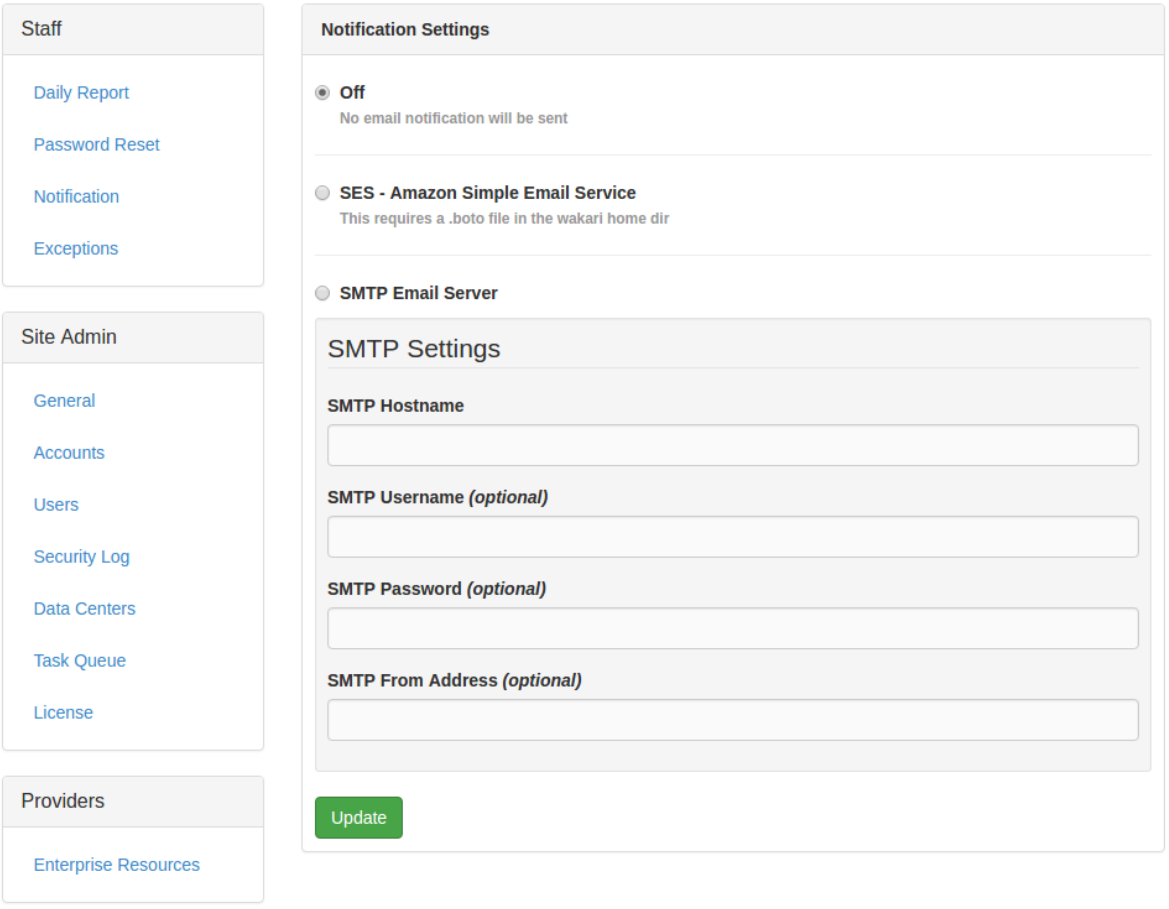
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

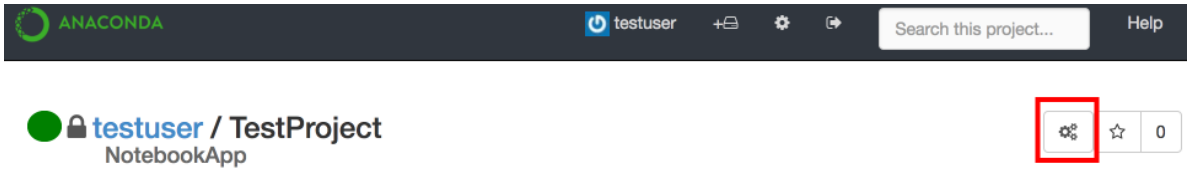
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

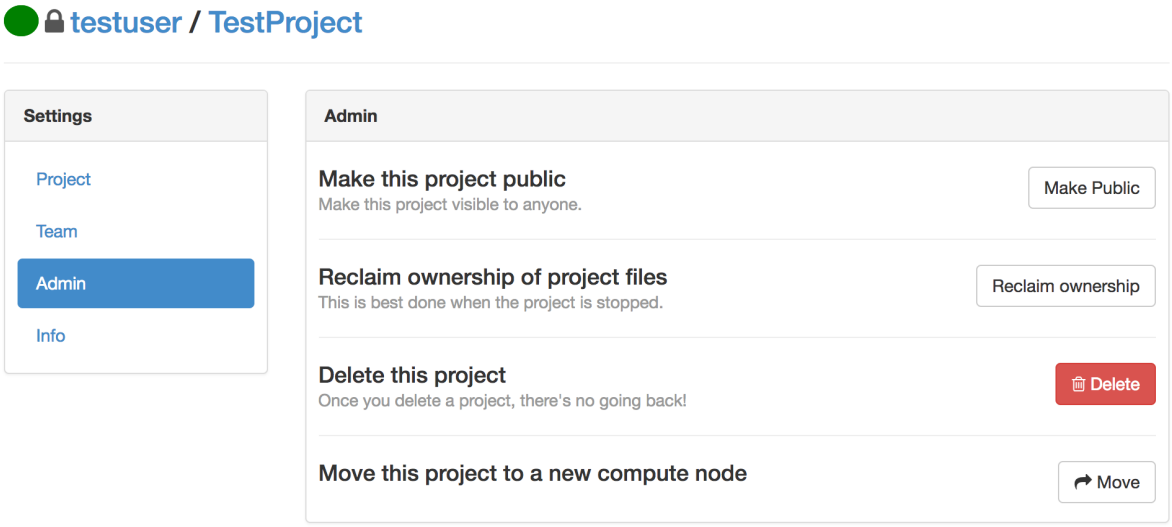
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

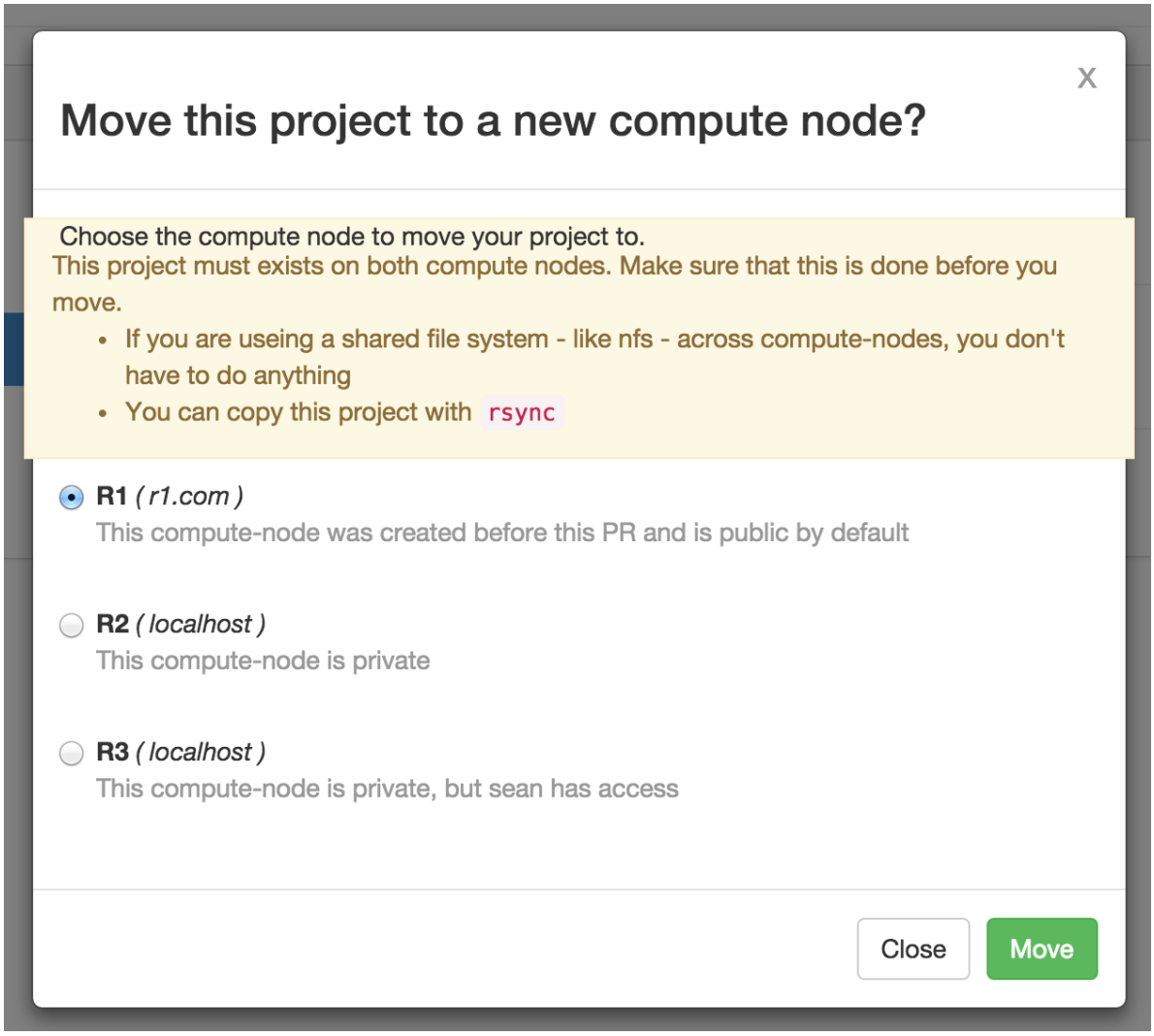
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

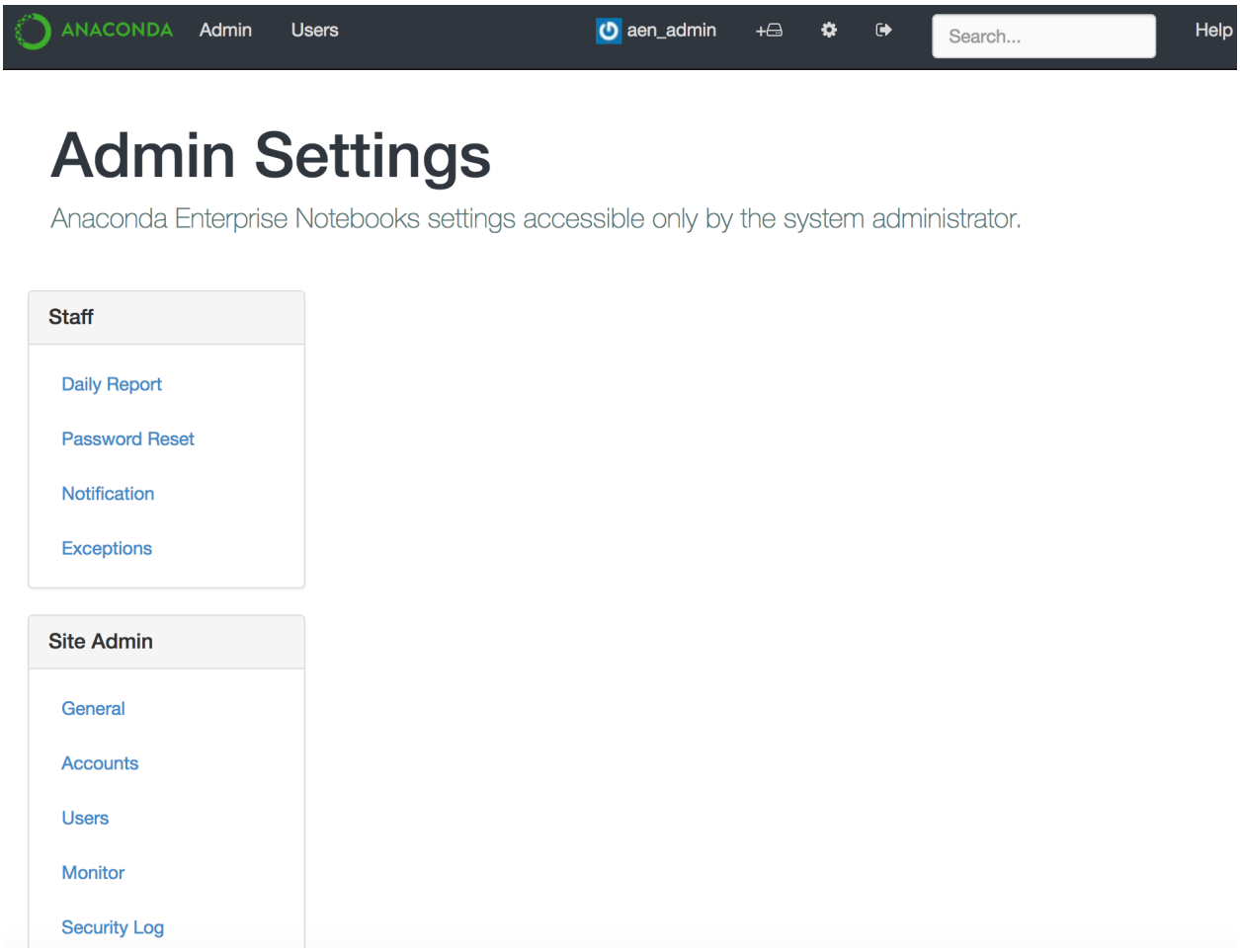
NOTE: Replace `<username>` with the actual username and `<projectname>` with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by $AEN_SRVC_ACCT.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by $AEN_SRVC_ACCT.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in /opt/wakari/wakari-gateway/etc/wakari/ and are owned by the $AEN_SRVC_ACCT.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

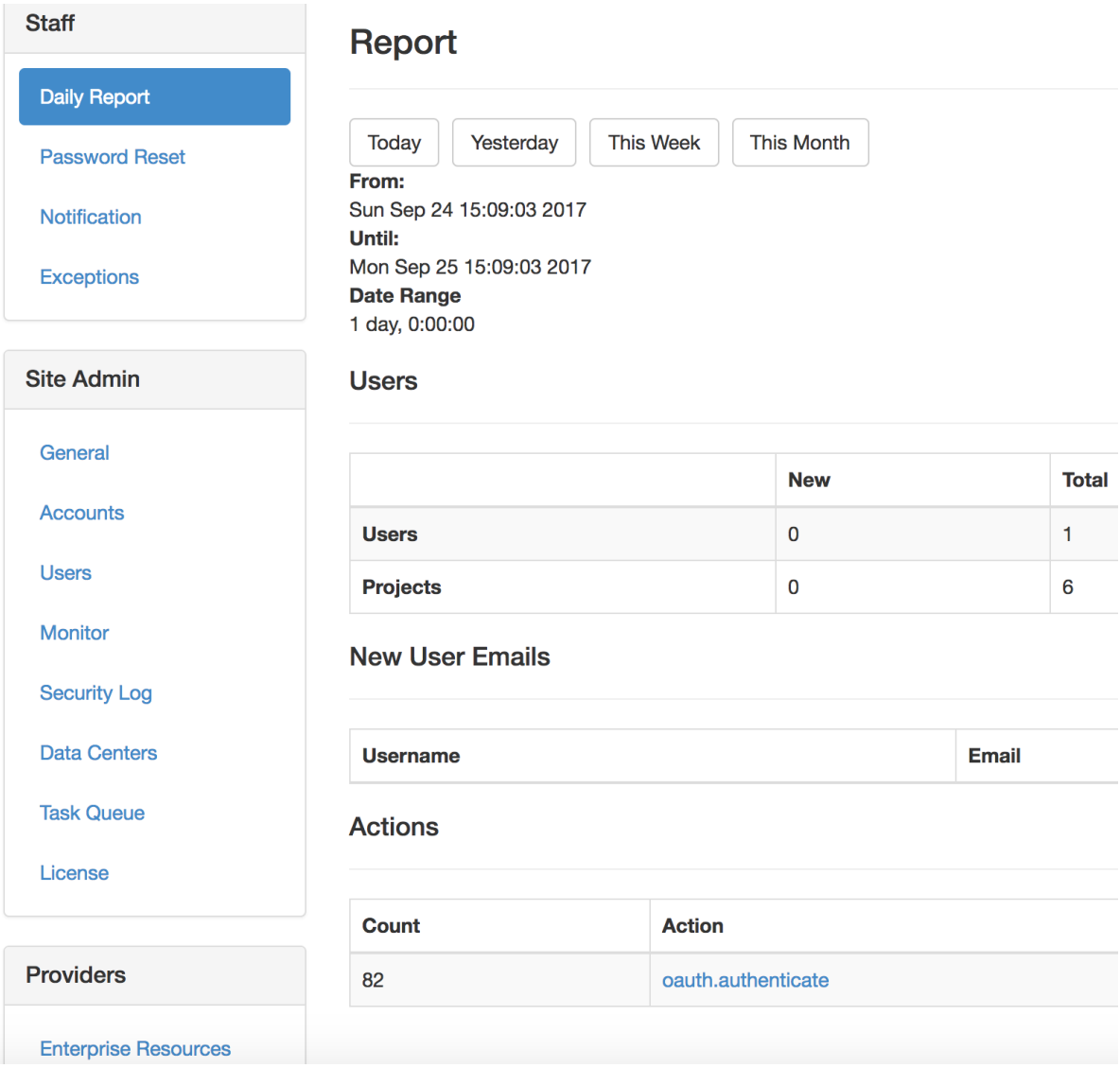
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



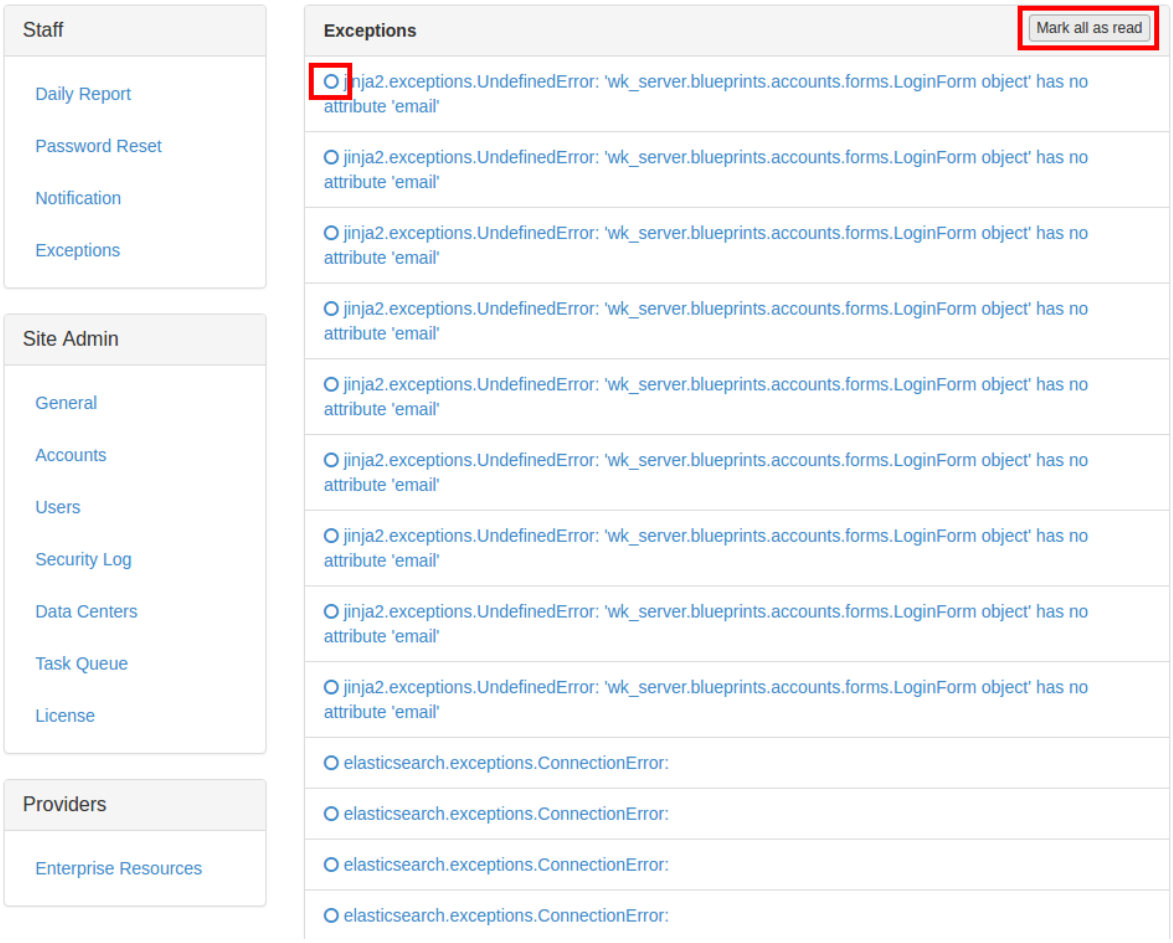
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

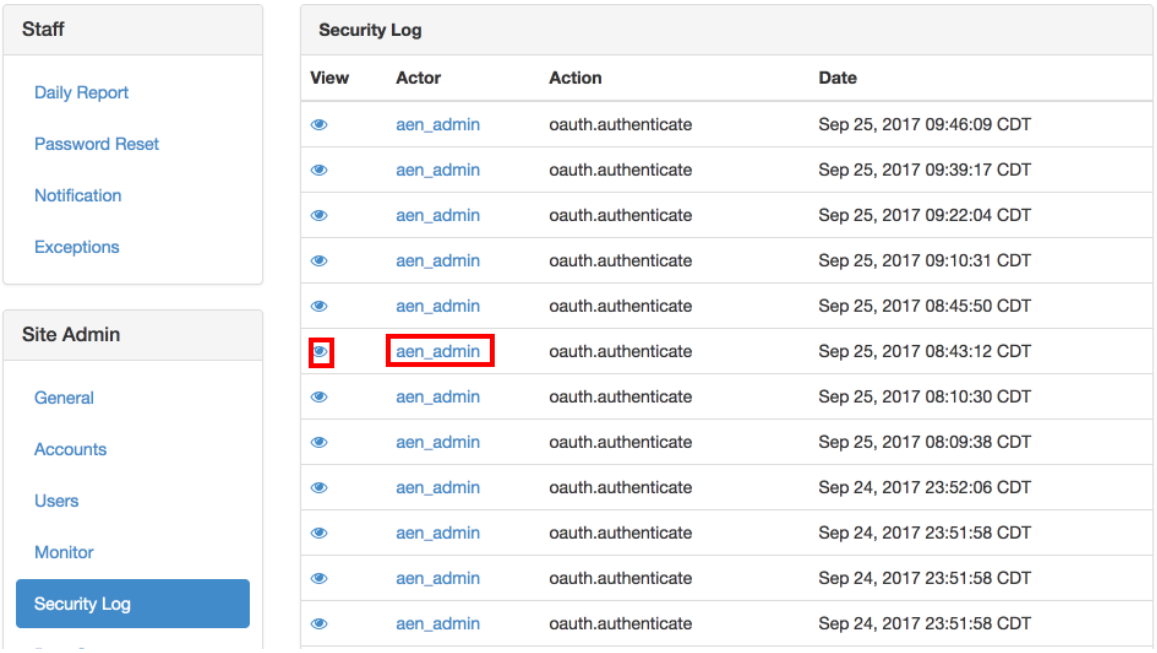
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

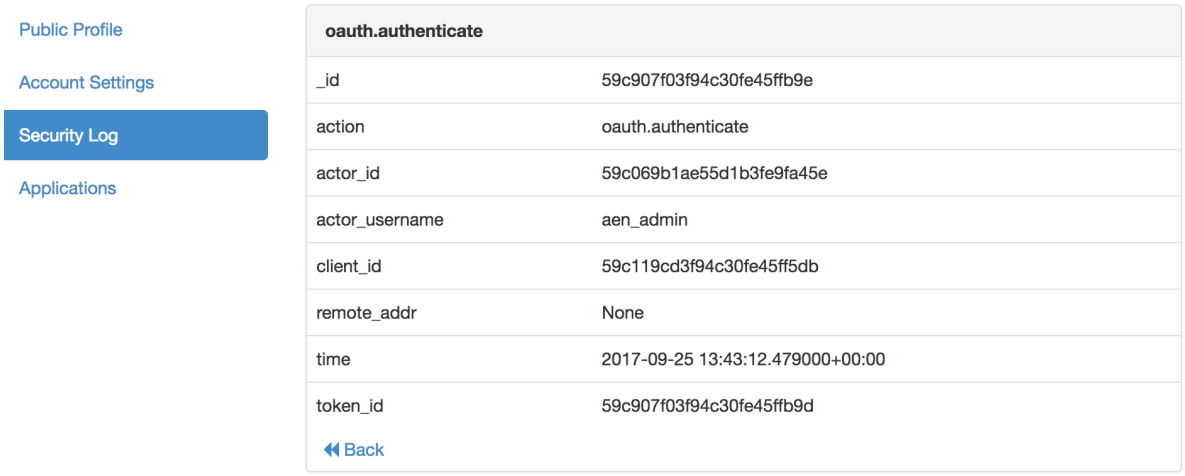
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

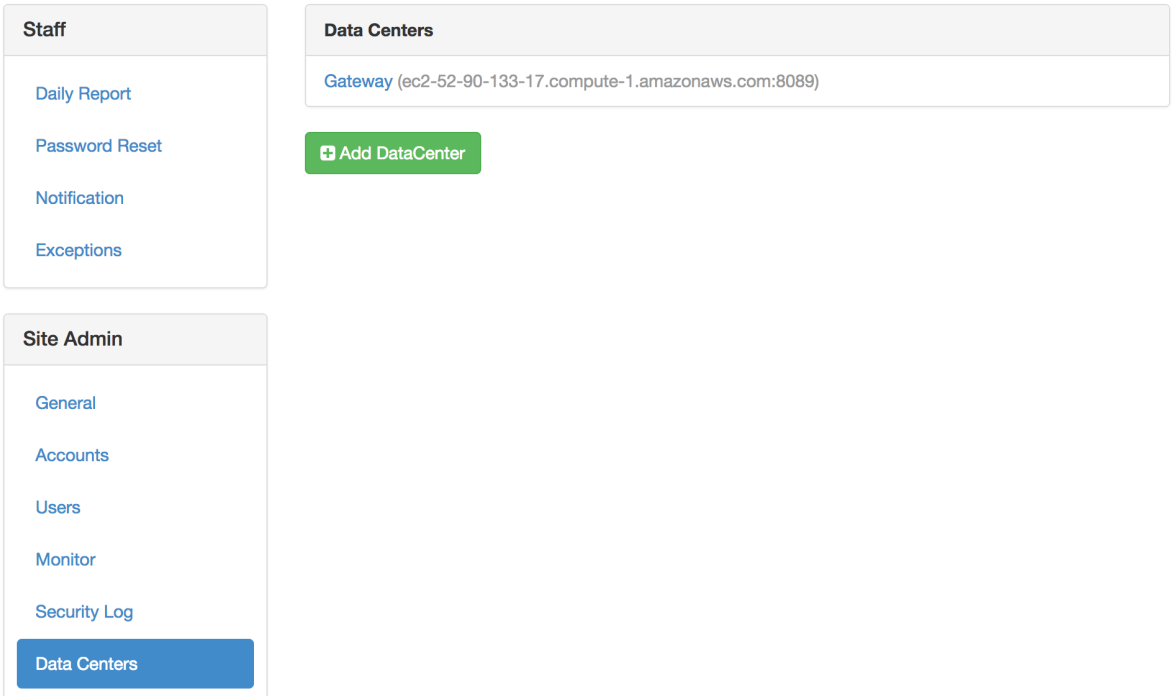
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

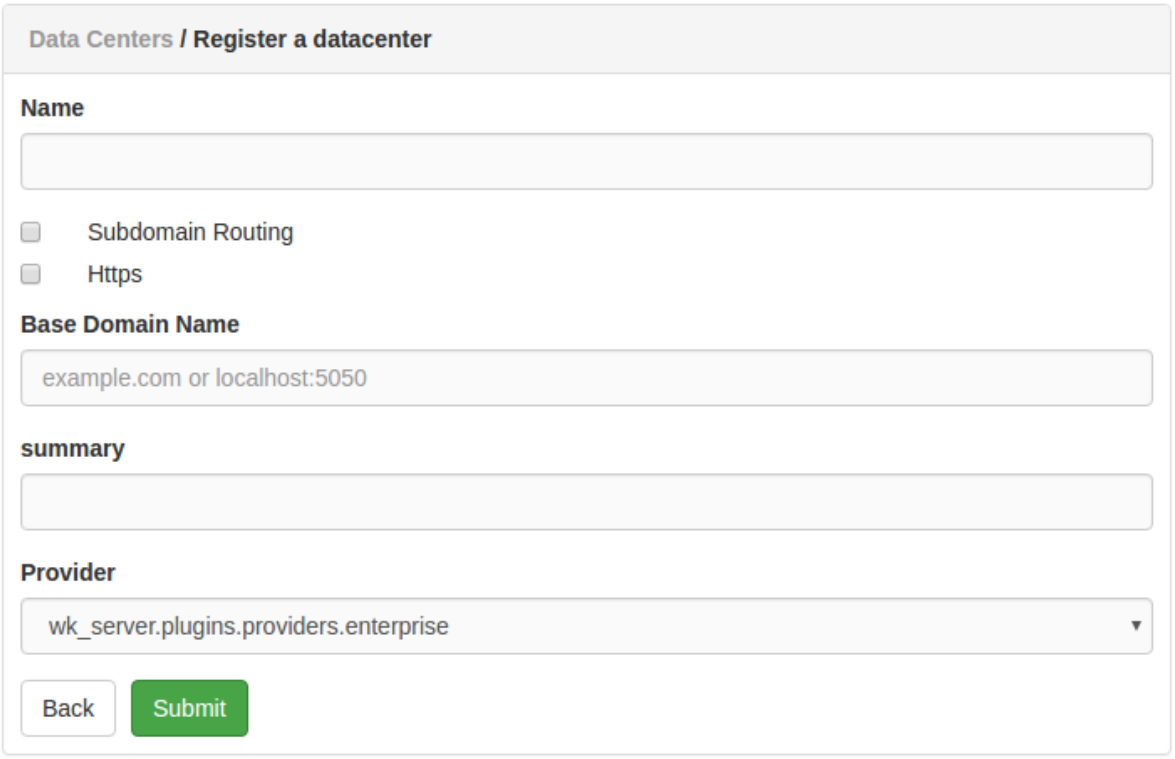
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

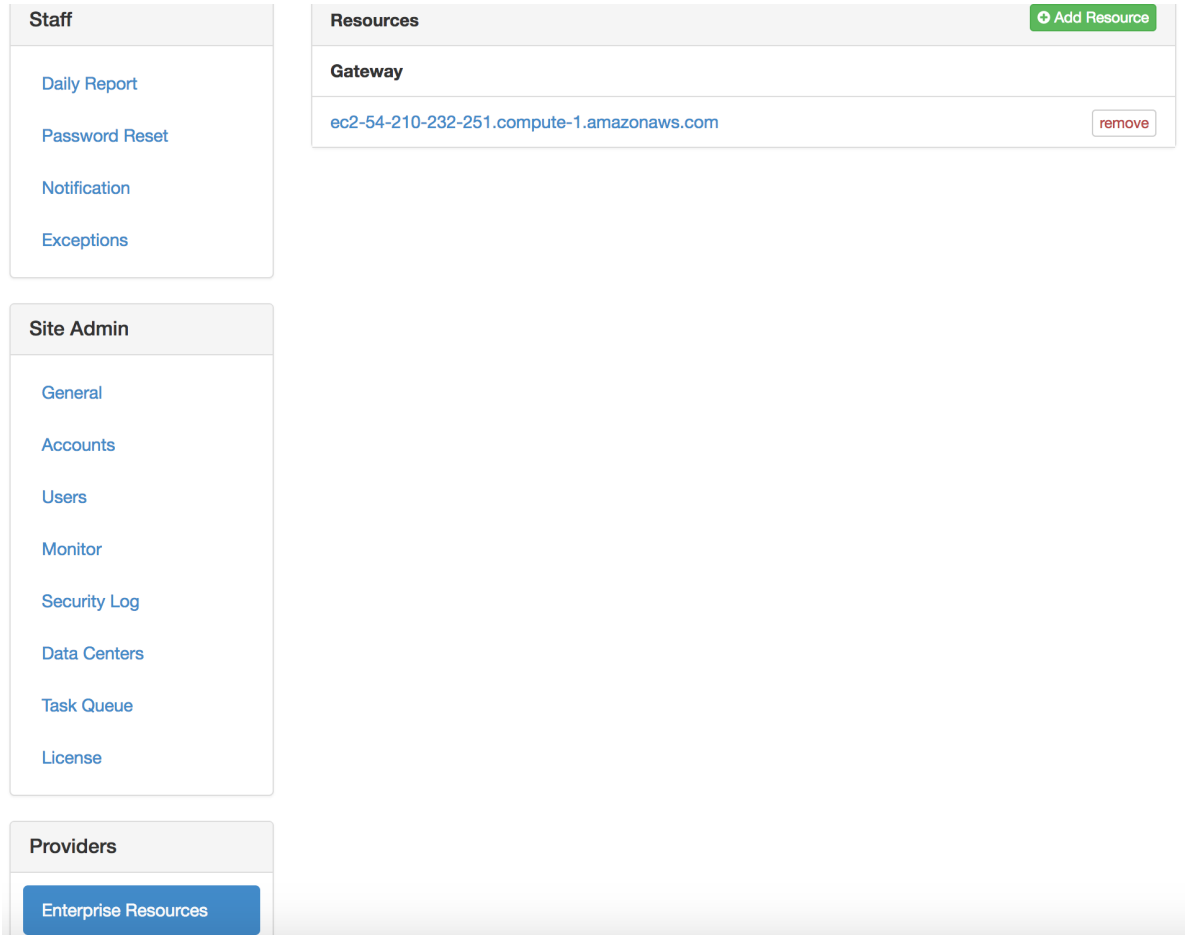
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

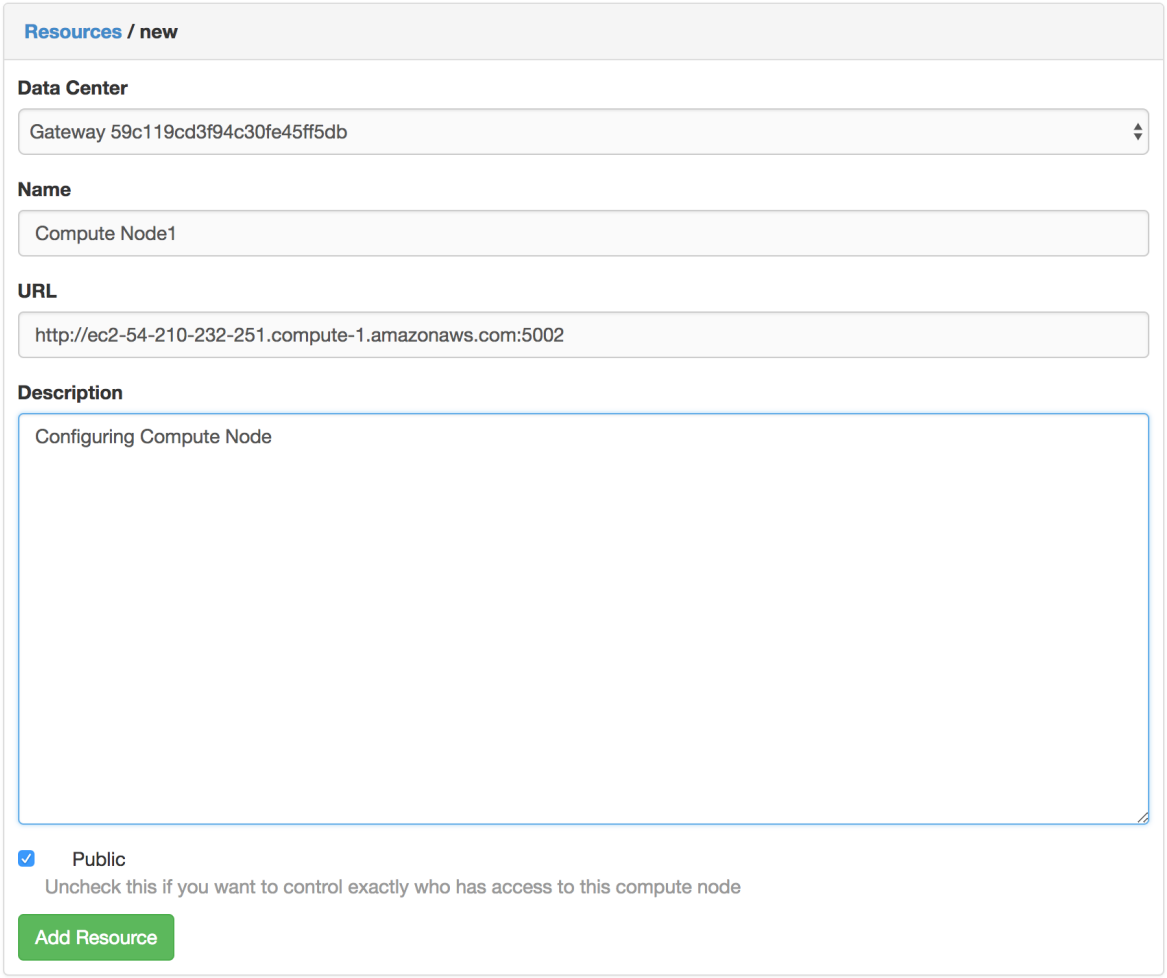
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

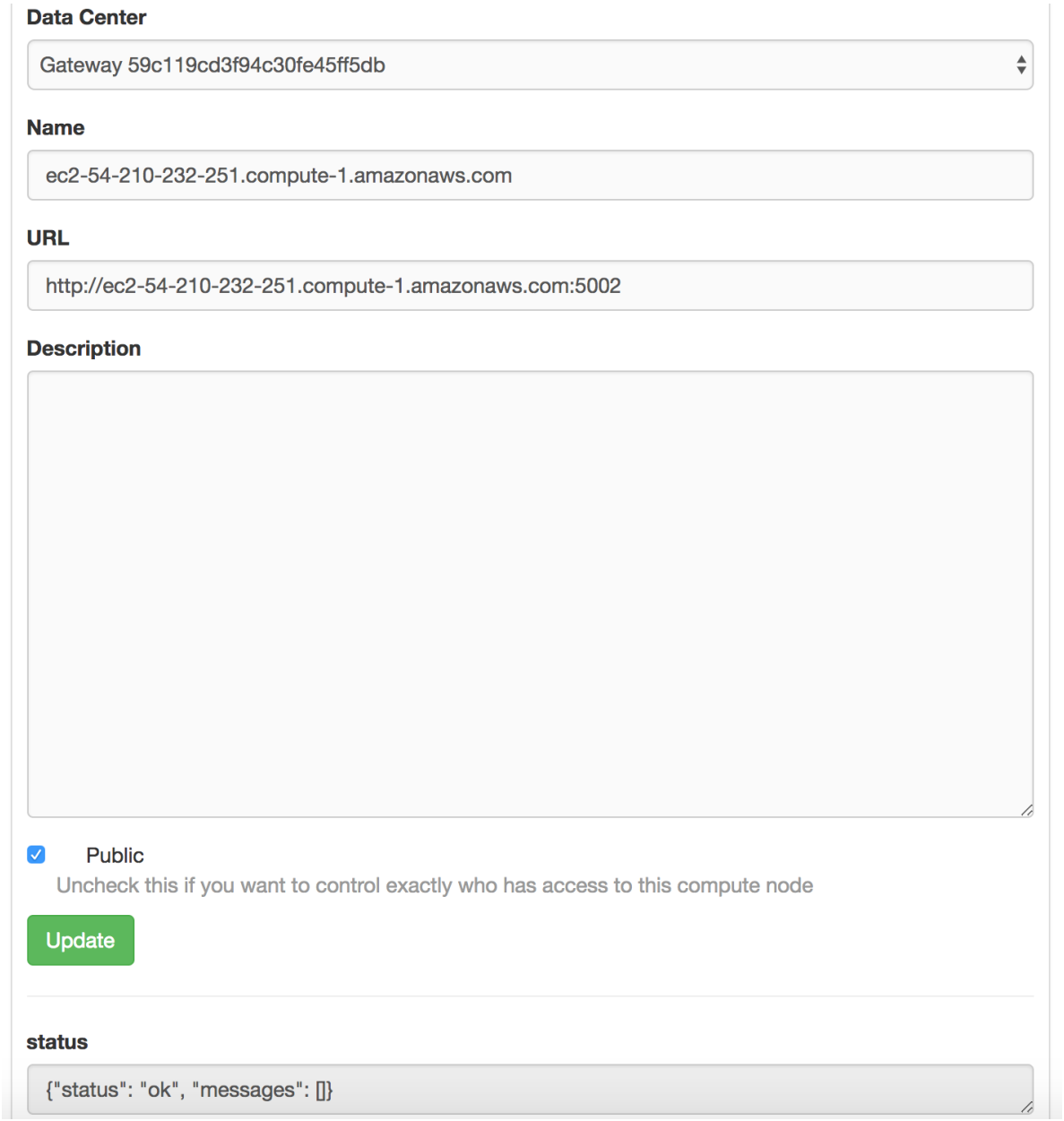
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

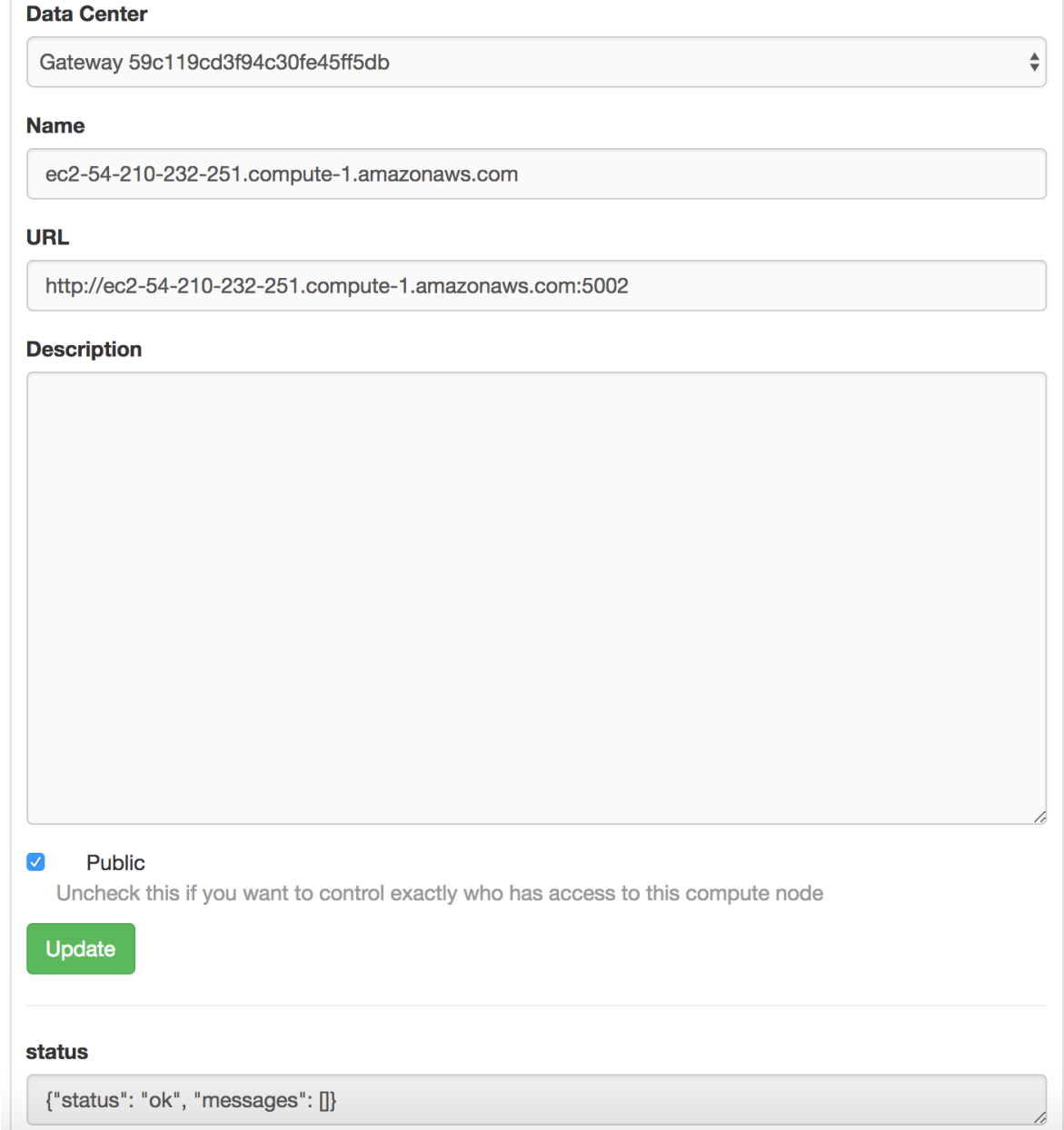
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, *move the project to a valid Compute Resource*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                        RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                           RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

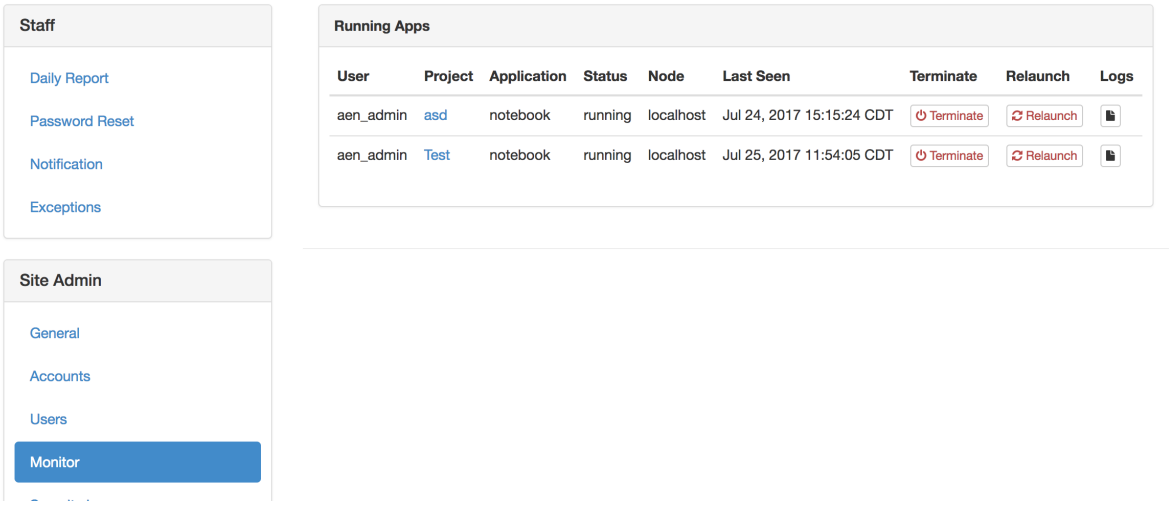
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

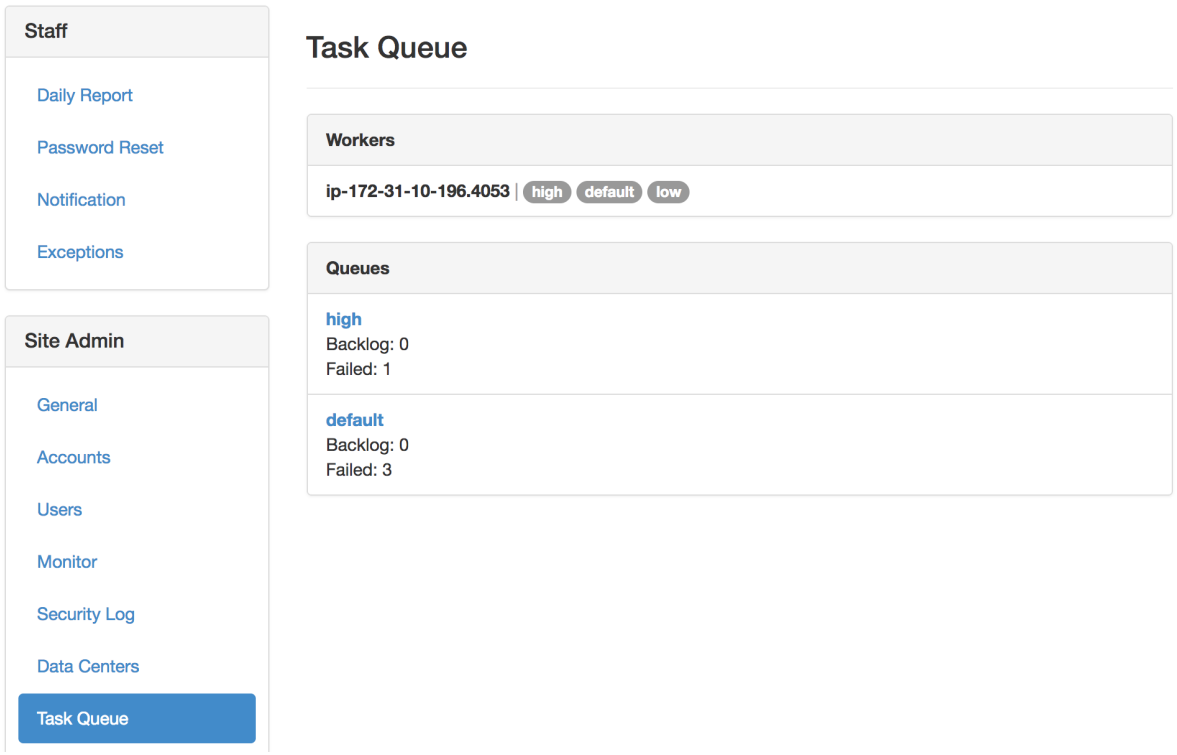
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

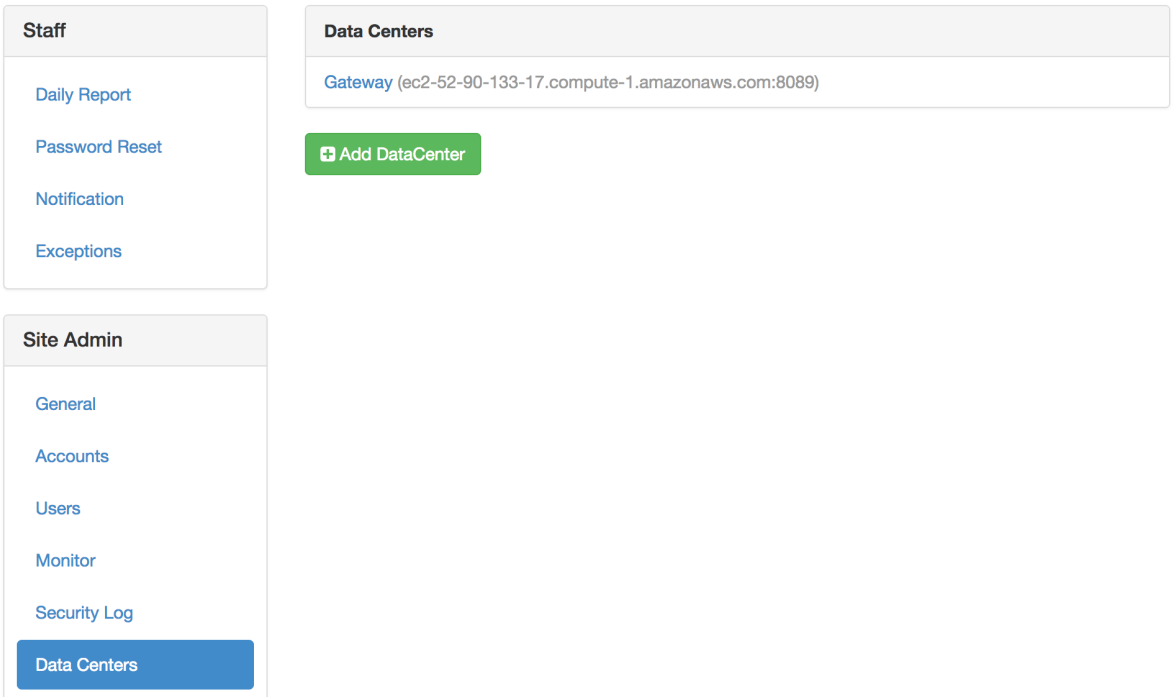
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



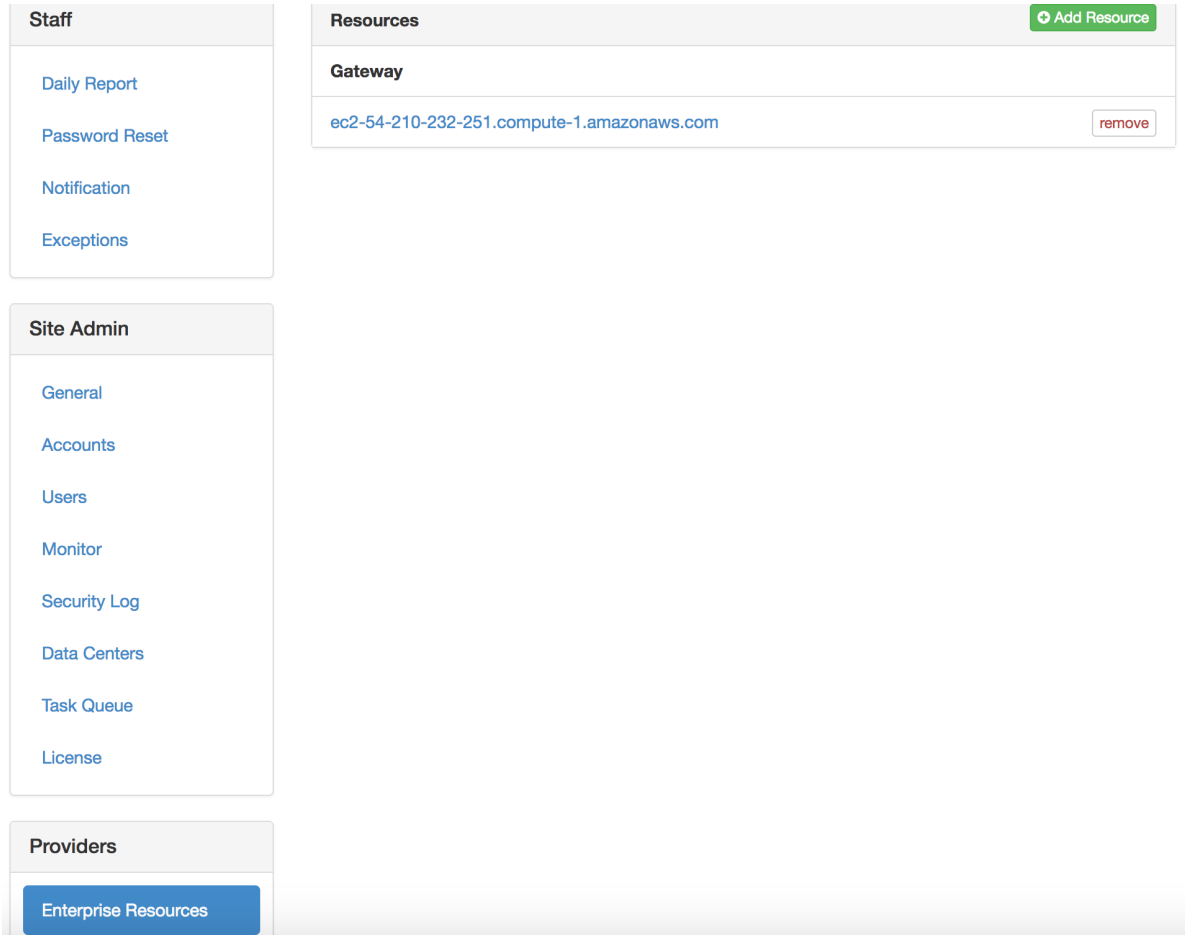
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

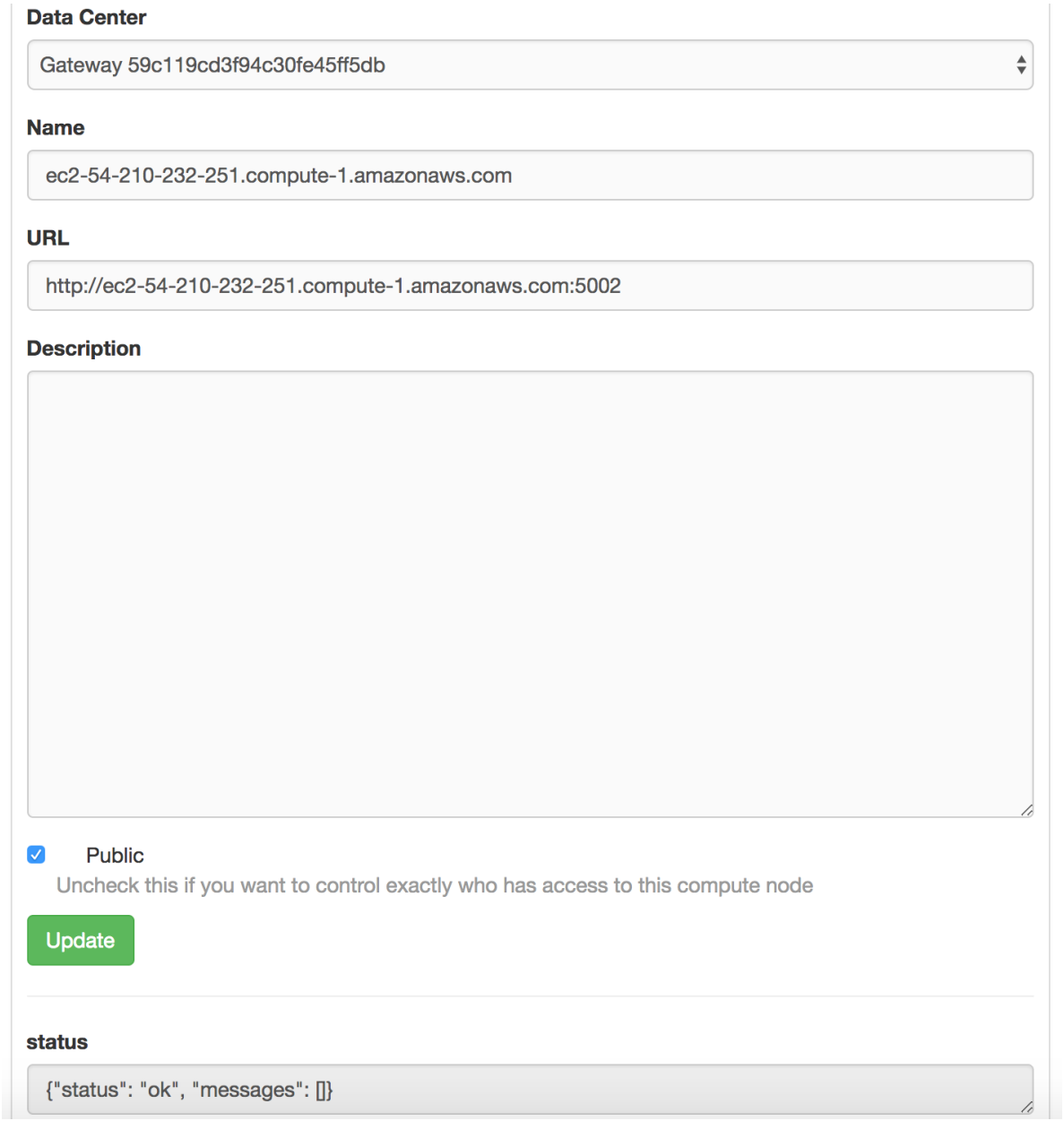
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

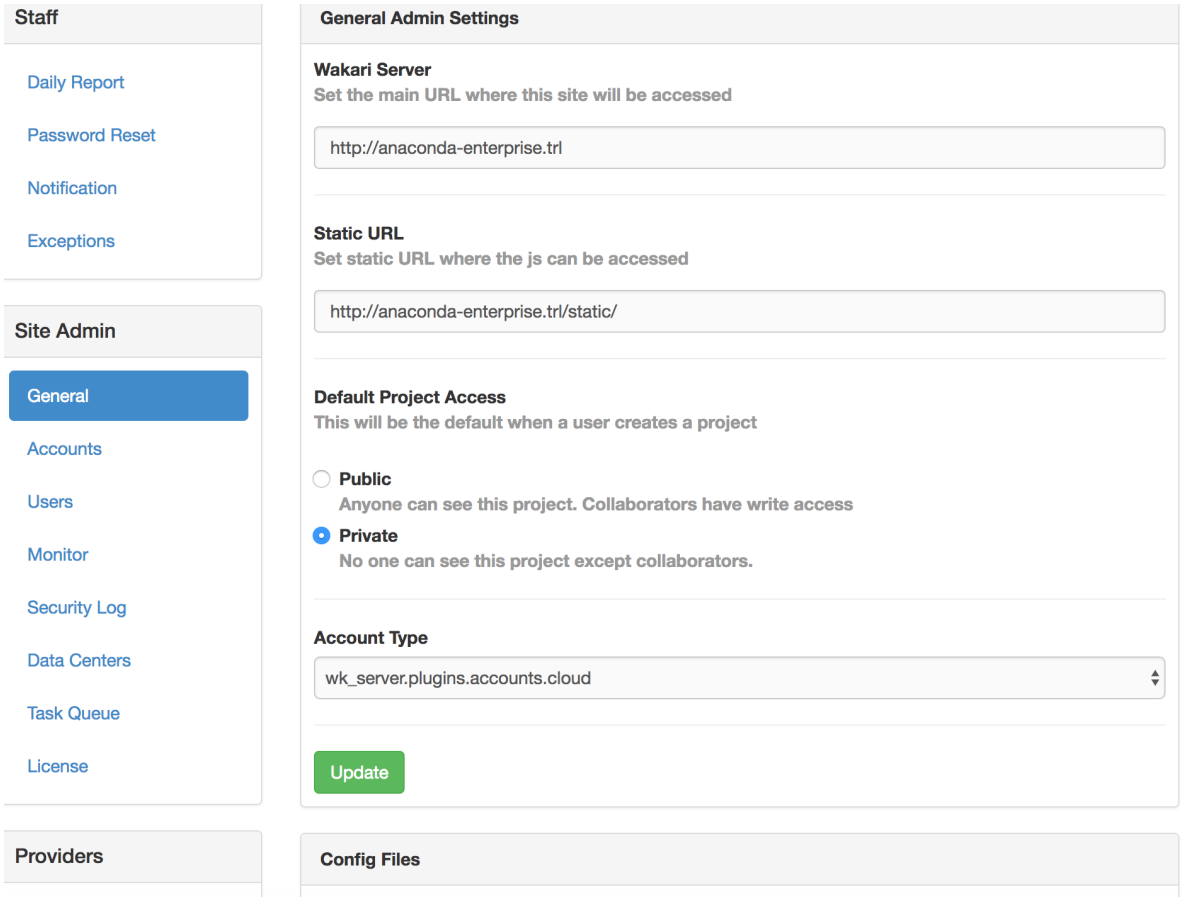
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

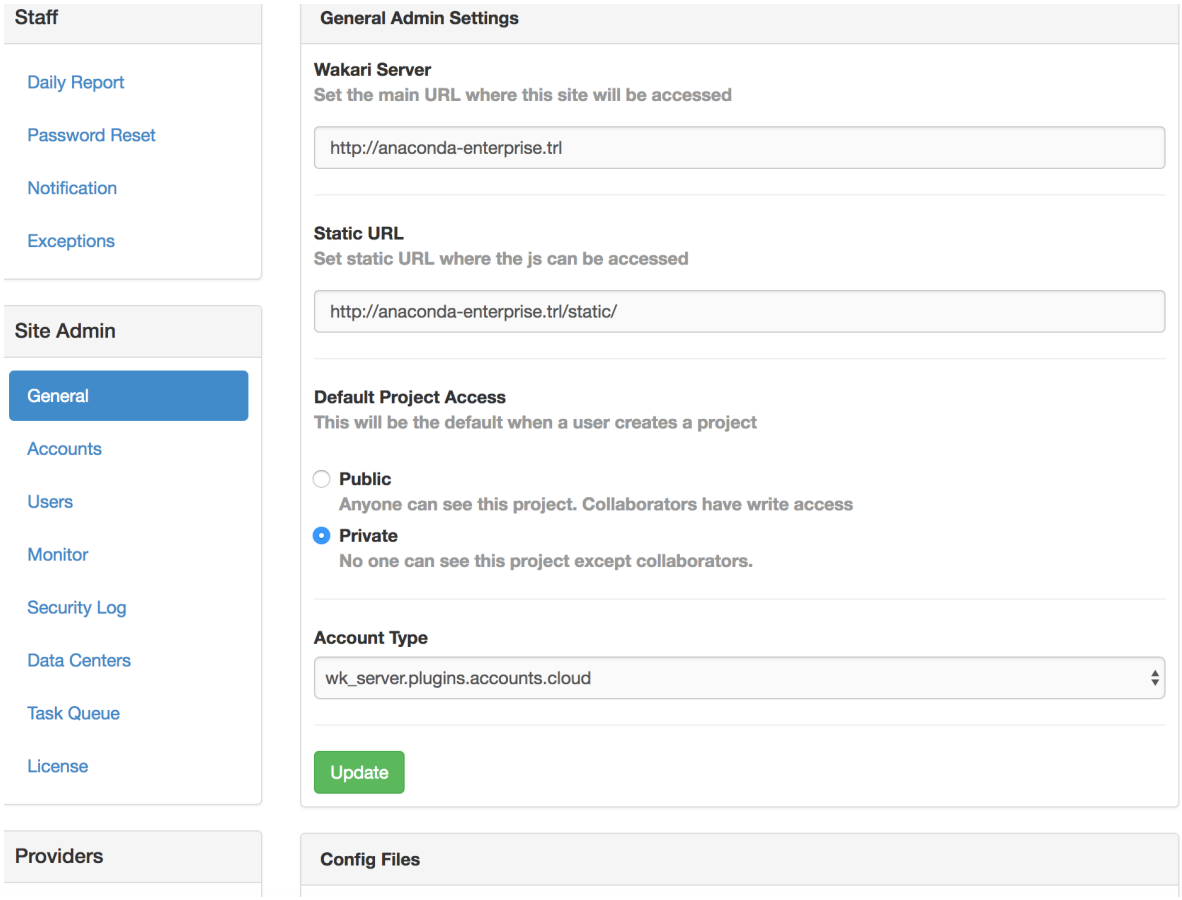
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

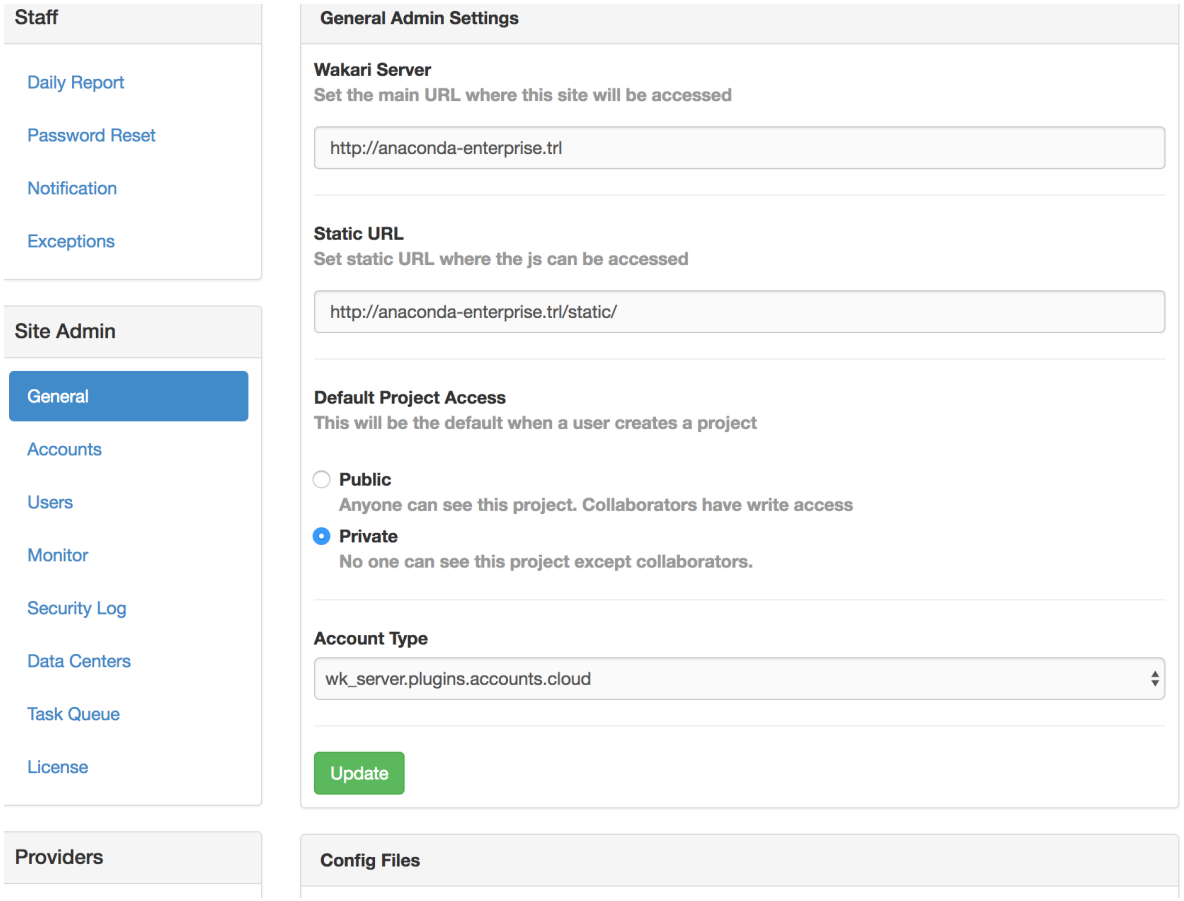
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

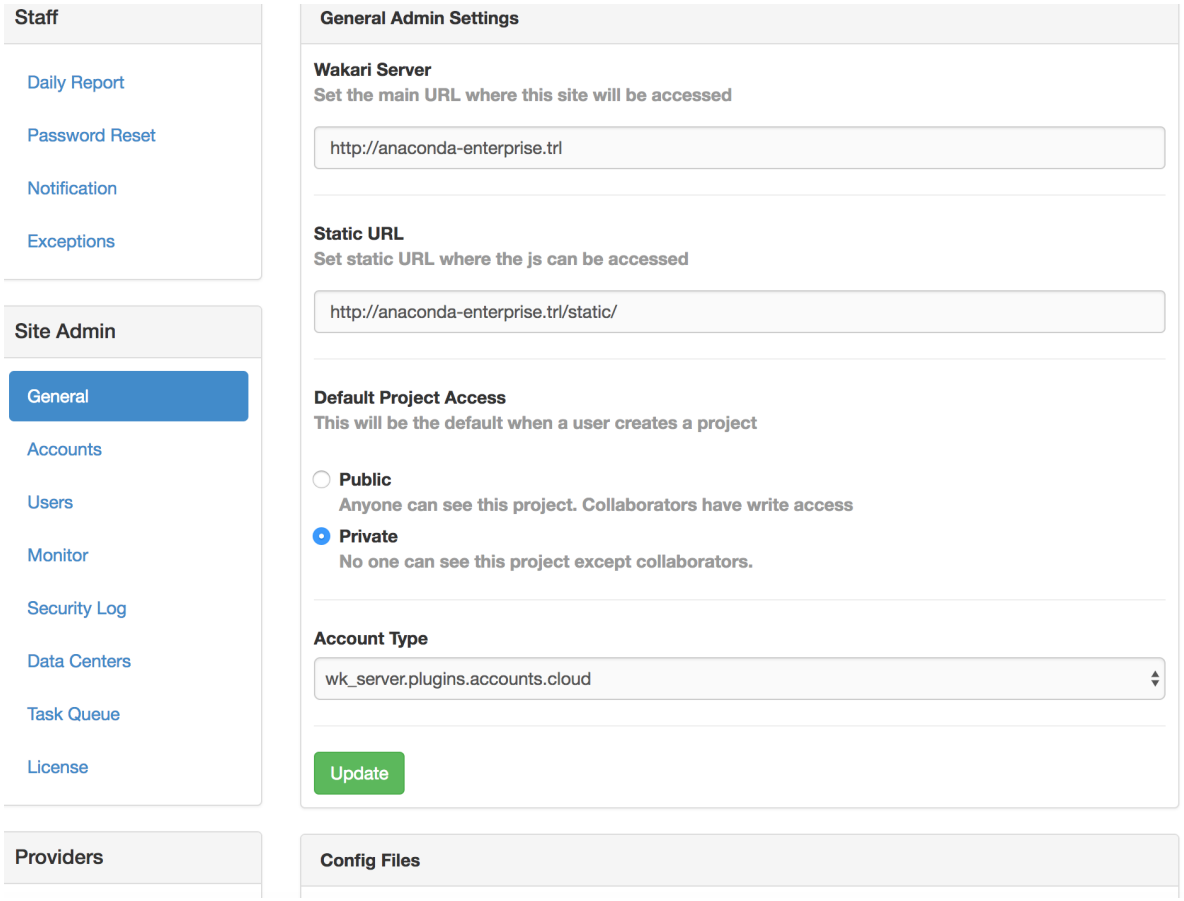
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

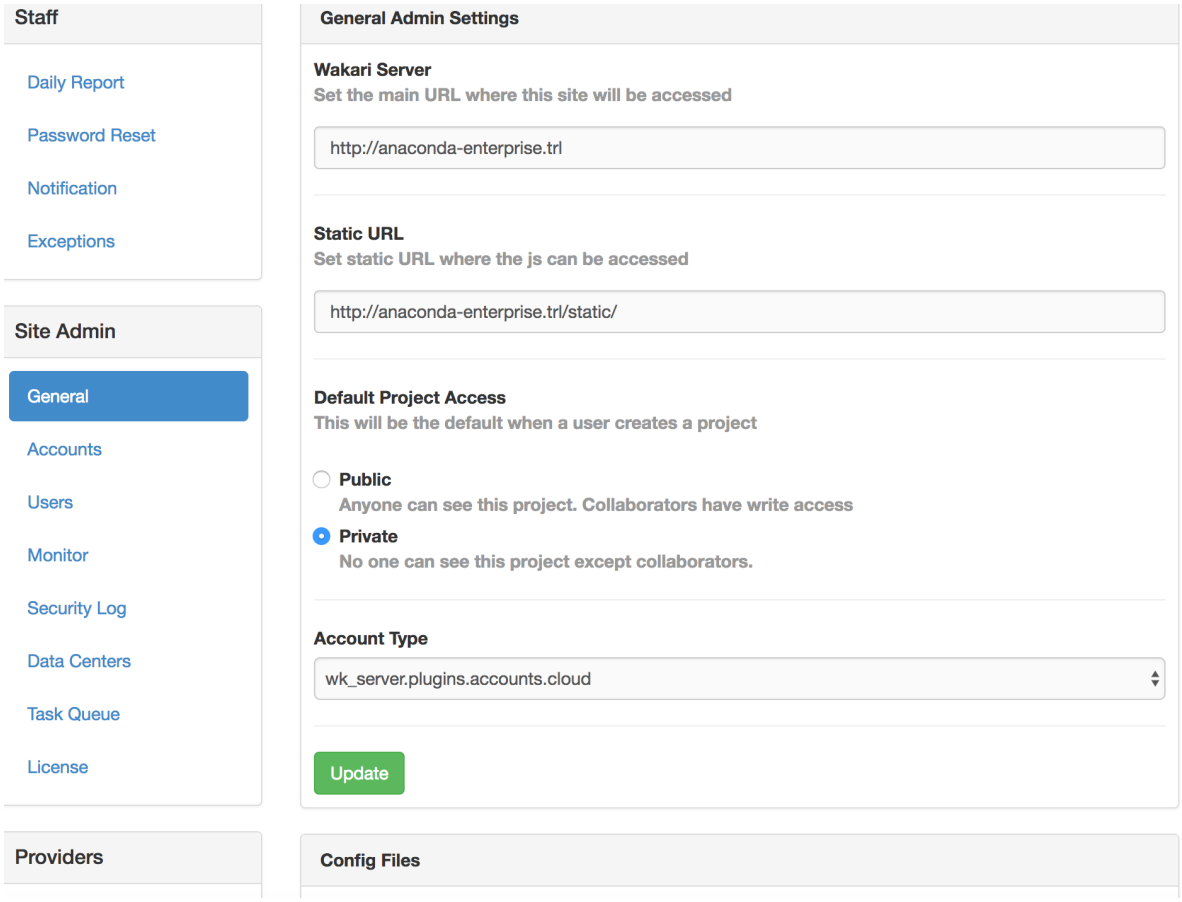
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

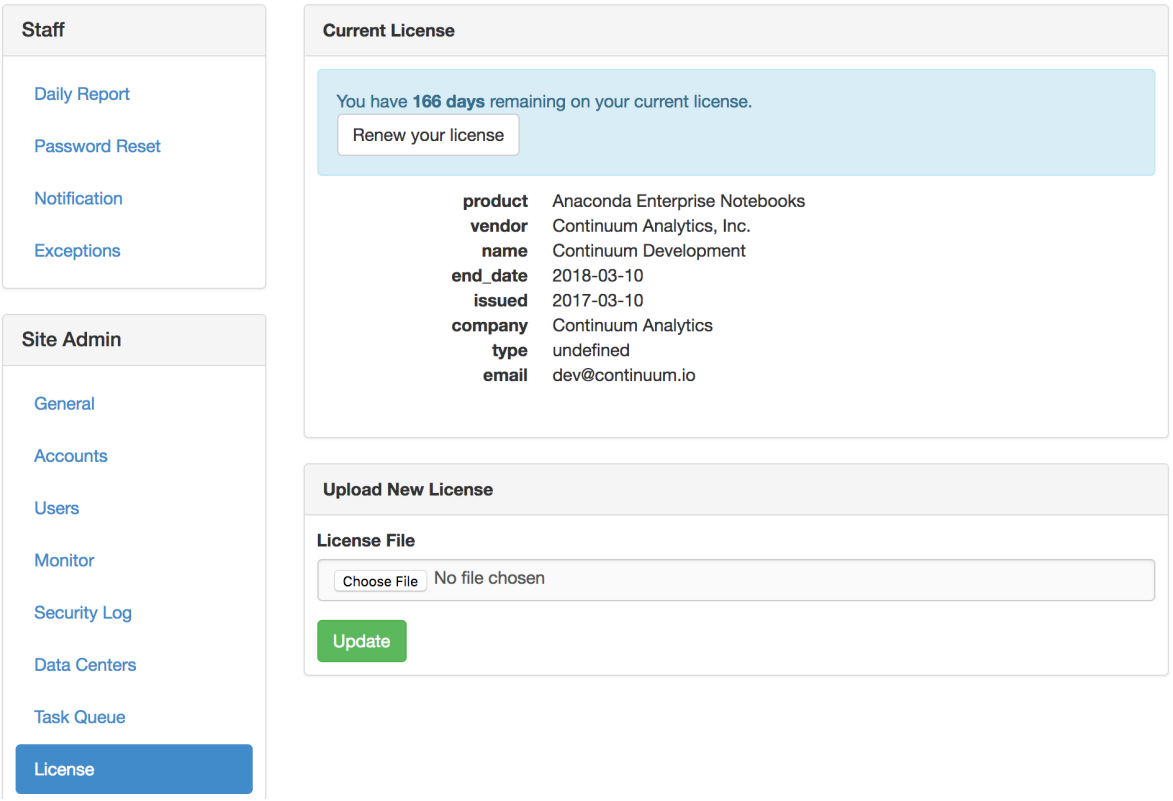
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.
7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

   NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.
3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

System Requirements

If you're a user of the Anaconda Distribution, please see the *Anaconda Distribution system requirements*.

If you're an Anaconda Enterprise 5 customer, please see the Anaconda Enterprise 5 installation requirements.

This page explains the requirements for Anaconda Enterprise 4 Repository, Anaconda Enterprise 4 Notebooks, and Anaconda Enterprise 4 Scale.

Anaconda Enterprise 4 Repository Requirements

Hardware requirements

- CPU: 2 x 64-bit 2.8 GHz 8.00 GT/s CPUs
- RAM: 32 GB (or 16 GB of 1600 MHz DDR3 RAM)
- Storage: 300 GB. (600 GB for air-gapped deployments.) Additional space recommended if the repository will be used to store packages built by the customer. With an empty repository, a base install requires 2 GB.
- Internet access to download the files from Anaconda.org or a USB drive containing all of the files you need with alternate instructions for air gapped installations.

Software & system requirements

- RHEL/CentOS 6.5 to 7.4, Ubuntu 12.04+
  - Ubuntu users may need to install cURL.
- Client environment may be Windows, macOS or Linux
- MongoDB 2.6 (provided)
- Anaconda Repository license file
- Cron entry to start the repo on reboot
- Linux system accounts
  - mongod (RHEL) or mongodb (Ubuntu)

  - anaconda-server

Security requirements

- Privileged access OR sudo capabilities
- Open HTTP(S) port
- SELinux policy edit privileges (SELinux does not have to be disabled for Anaconda Repository operation)
- Optional: Ability to make iptables modifications
- Optional: SSL certificate

Network requirements (TCP ports)

- Inbound HTTP: TCP 8080, 8443 (Anaconda repository)
- Optional Inbound SSH: TCP 22 (SSH)
- Optional Outbound HTTPS: TCP 443
  - repo.anaconda.com
  - anaconda.org
  - conda.anaconda.org
  - binstar-cio-packages-prod.s3.amazonaws.com
  - 820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.com
- Optional Outbound SMTP: TCP 25 (if not using AD/LDAP) email notifications
- Optional Outbound LDAP(s): TCP 389/636 for authentication integration

Other Requirements

- License file provided to you by Anaconda at the time of purchase
- Installation tokens for binstar and anaconda-server channels provided by Anaconda at the time of purchase. Not applicable for air gapped installs.
- Optional: Your Anaconda.org account credentials. Not applicable for air gapped installs.

Anaconda Enterprise 4 Scale Requirements

Hardware Recommendations

- Head and Compute nodes
  - RAM: 8+ GB
  - CPU: 8+ cores
  - Storage: 4 GB

Note: Analyses running on Compute Nodes will be primary driver of resource requirements.

Software Requirements

- Head and Compute nodes:
  - RHEL/CentOS 6, Ubuntu 14

Security Requirements

- One of the following configurations can be used during installation:
  - Access to the root user with the root password
  - Access to the root user with an SSH keypair
  - Passwordless SSH/sudo enabled for a user account
  - Password-based SSH and passwordless sudo enabled for a user account
- SELinux in Permissive mode (or, SELinux contexts can be configured via Anaconda Adam)

Network Requirements

- TCP Ports
  - TCP 22 (SSH) from head node to compute nodes
  - TCP 14505, 14506 (Salt) between head node and compute nodes
  - TCP 18000 (Salt REST API) from compute nodes to head node
  - Outbound TCP 443 from all machines to local Anaconda Repo

Anaconda Enterprise 4 Notebooks Requirements

Hardware Recommendations

The server and gateway can be on the same machine as Anaconda Repository.

- AEN Server
  - RAM: 2+ GB
  - CPU: 2+ cores
  - Storage: 20 GB
- AEN Gateway
  - RAM: 2 GB
  - CPU: 2 cores
  - Storage: 3 MB (minimal storage required)
- AEN Project Nodes (N-machines)
  - RAM: 2 GB
  - CPU: 2 cores
  - Storage: 3 GB/project

Note: Analyses running on Project Nodes will be primary driver of resource requirements.

OS Requirements

- RHEL/CentOS, any version from 6.5 through 7.4
- Bash installed on Project Nodes
- /opt/wakari: Ability to install here and at least 5 GB of storage
- /projects: (only needed on Project nodes)
  - Important: This directory needs the filesystem mounted with Posix ACL support (Posix.1e)
  - Check with *mount* and *tune2fs -l /path/to/filesystem | grep options*
- Linux home directories. Jupyter looks in $HOME for profiles and extensions.
- Linux system accounts:
  - mongod (RHEL) or mongodb (Ubuntu/Debian): Created by the RPM or deb package (AEN Server)
  - elasticsearch: Created by RPM or deb package (AEN Server)
  - nginx: Created by RPM or deb package (AEN Server)
  - aen_admin (may also be wakari or another name): AEN Service Account, created during installation of Anaconda Enterprise Notebooks.

The AEN Service Account name is the AEN Functional ID or NFI. The NFI defaults to "wakari" and is configurable. Anaconda suggests using "aen_admin".

Software Prerequisites

- MongoDB 2.6 [AEN Server]
- Nginx version: >=1.4.0 [AEN Server]
- git [AEN Project]
- bash or zsh [AEN Project]
- bzip2 [AEN Project, AEN Server]
- ElasticSearch [AEN Server]
  - Oracle JRE 1.7 or 8 [AEN Server]
- X Windows (for R-based visualizations, not provided)

Security Requirements

- root or sudo access at installation and runtime
- SELinux in Permissive mode - check with *getenforce*

Network Requirements

- TCP Ports
  - Server: 80, Outbound 389/636 (LDAP)
  - Gateway (inbound): 8089
  - Project (inbound): 5002
  - All: Outbound 443 (to local Anaconda Repo)
  - Outbound TCP 443: 820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.com
- End users' browsers communicate with AEN using WebSockets.

Important note: these system requirements are suitable for the majority of implementations. Our implementation team can explain the scenarios and usage patterns that would require more resources.

Ver. 2018-09-17

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise 4 Notebooks*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the AEN_SRVC_ACCT and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.3.3 Nov 5th, 2019

Administrator-facing changes:

- Support fetching packages from the `main` channel
- Add a new configuration key `emptyDefaultChannels` to avoid searching packages from the `free` channel
- Documentation updates

User-facing changes:

- Remove gdal and basemap
- Update ipykernel, jupyter_core and jupyter_client
- Update astropy, scikit-learn, dask, numba, numpy, scipy, pandas and matplotlib

Internal Fixes:

- Update Python to version 2.7.17
- Update Angular to version 1.7.8
- Update urllib3 to version 1.25.3
- Update Node.js to version 10.15.3
- Replace pycrypto with pycryptodome 3.8.2
- Update paramiko to version 2.60
- Update jinja2 to version 2.10
- Update request to version 2.88
- Update grunt to version 1.0.4
- Update requests to version 2.22.0
- Update gunicorn to version 19.9.0
- Update openldap to version 2.4.46
- Update python-ldap to version 3.2.0
- Removed growl and superagent dependencies

- Update rbase and r-essentials to version 3.5.1

v4.3.2 May 29, 2019

Internal Fixes:

- Update Bootstrap to version 4.3.1
- Update jQuery to version 3.3.1
- Update jQuery UI to version 1.12.1
- Update notebook to version 5.7.8
- Update ipywidgets to version 7.4.2
- Update ipyparallel to version 6.2.3
- Set Secure flag on xsrf, access_token, and refresh_token cookies

v4.3.1 March 25, 2019

Administrator-facing changes:

- Add option for server-side session management
- Add option to terminate terminal sessions on logout

Internal Fixes:

- Set Secure and HTTPOnly flag on session cookies
- Fix XSS vulnerability

v4.3.0 October 24, 2018

Administrator-facing changes:

- Fix bug where compute logging wasn't respecting the `logMaxFiles` key
- Log and display a descriptive error message when there is a problem creating the users index
- Log and display a descriptive error message when there is a problem creating a new user with a duplicated e-mail address when the `uniqueEmail` setting is enabled
- Add footer server pages with server host data (IP, AEN version and server version)
- Fix admin script to change the status of private projects
- Fix validation error when updating/editing an existing resource
- Docs: Add KB article about using MongoDB to update old projects with new Data Center information
- Docs: Add restarting service step to SSO documentation
- Docs: Add support for newer versions of MongoDB
- Docs: Add documentation on `uniqueEmail`
- Docs: Add `projDirsAsHome` key to config docs
- Docs: Rewrite the "Using project directories as home directories" section

- Docs: Add full path to admin commands
- Docs: Warn about upgrading away from tested pkgs
- Docs: Add missing steps to "Authenticating with LDAP" section
- Docs: Add troubleshooting documentation about orphaned projects
- Docs: Warn about not using IP address when you connect to AEN
- Docs: Add an entry about 'Error starting projects' in the troubleshooting page
- Docs: Rewrite "Group and user permissions for NFS" section and description of the `identicalGID` key in the config pages
- Docs: Add a new section about using MRO packages in AEN (Update: MRO was discontinued in 2021) (Update: MRO was discontinued in 2021)
- Docs: Preserve username capitalization when using LDAP/AD
- Docs: Add umask 0022 to security requirements
- Docs: Add new section about changing install location
- Docs: Add note about how to manually break out Root CA for the gateway
- Docs: Add note about upgrading custom environments
- Docs: Add notes about how to find conda config files inside AEN
- Docs: Add note about using `USE_SERVER_BASED_SESSIONS: false` when configuring SSO between AEN and versions 2.33.3 through 2.33.10 of the Repository

User-facing changes:

- Increase Workbench file upload limit
- Fix Bokeh examples
- Extend `nb_locker` to detect a server disconnection and generate an alert if it occurs
- Docs: Update the notebook app to correctly point to AEN docs
- Docs: Emphasize that permissions are not applied recursively in the workbench

Internal fixes:

- Update Nginx version to v1.12.2
- Remove unused server config file during the compute upgrade process
- Remove already defined compute default settings from the post-script step
- Pin widgetsnbextension version to prevent version mismatch issue (ipywidgets)
- Remove `--offline` flag from the conda clone operations
- Support MongoDB 3.4.14 and update pymongo to version 3.2.2
- Fix LDAP username case sensitivity
- Security fixes and enhancements

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs
- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7
- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date
- Server: Fix bug Monitor Report blank
- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected "ca" key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes
- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace 'wakari' wording
- New config option to move the user's home directory into the user's project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user's home directory into the user's project directory
- Package cache was moved from user's home directory into the user's project directory
- Change wakari logos to Anaconda logos
- Fix error for deleting tags to work
- Define shell prompt in `.projectrc` template
- Replace 'wakari' wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile

- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application
- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove “wakari” word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair “Create Account” link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating
- Compute resource: Show full path to log file
- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes
- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation
- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089
- Added support for all-numeric usernames
- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher
- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.
- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes

- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Previous versions

Documentation for previous versions is provided for users who have not yet upgraded to the current version of AEN.

Anaconda Enterprise 4 Notebooks

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.3.3, released on November 5th, 2019.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

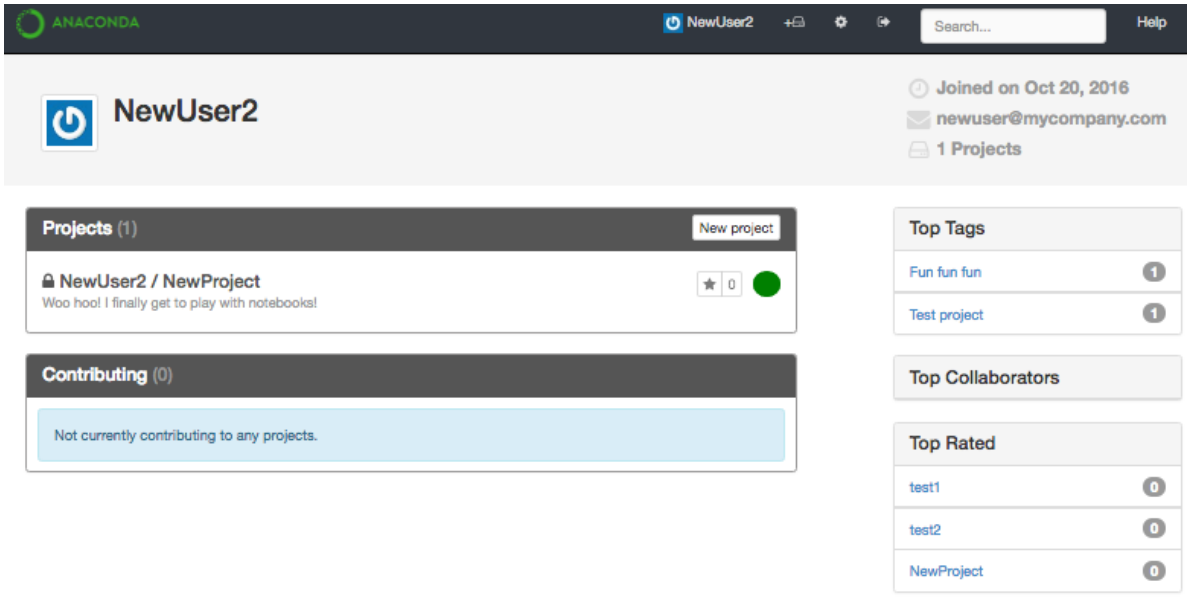
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

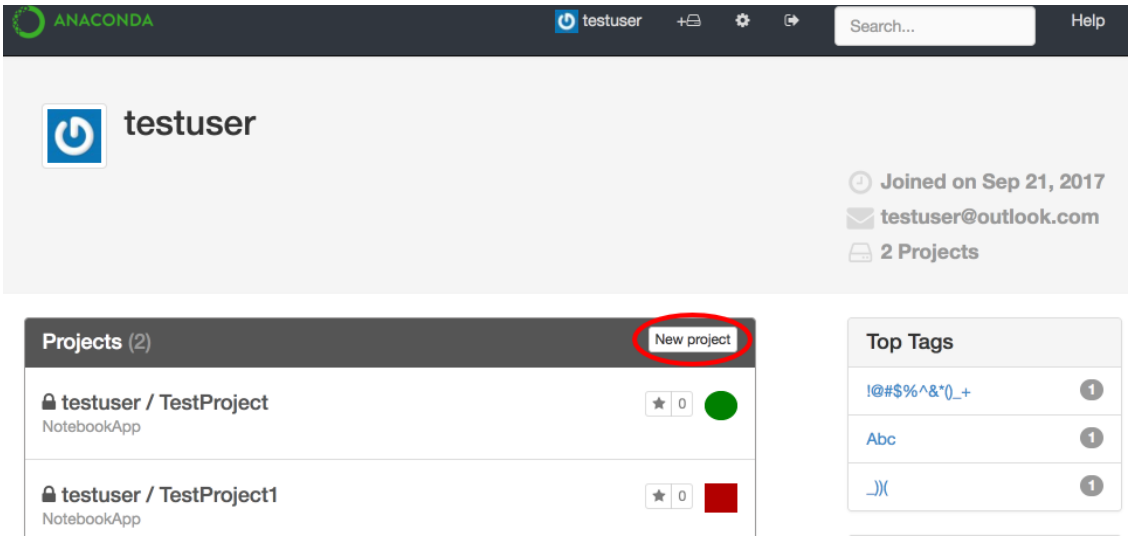
   Your user home page, where all good things happen, is displayed:



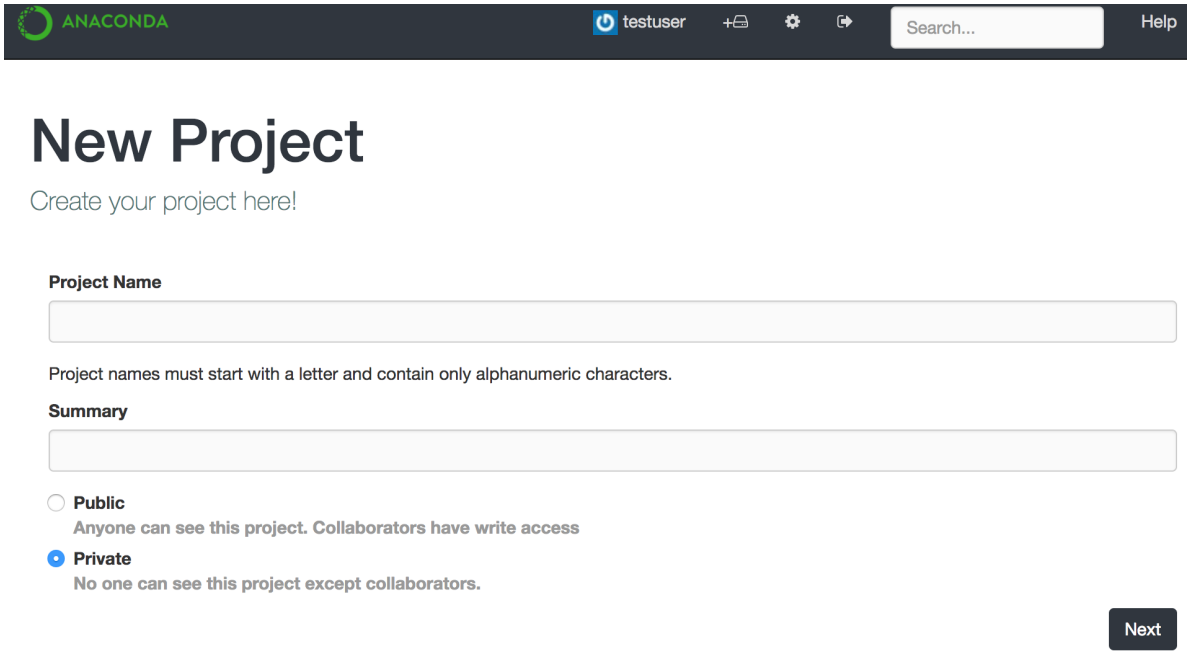
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as “Testing.”

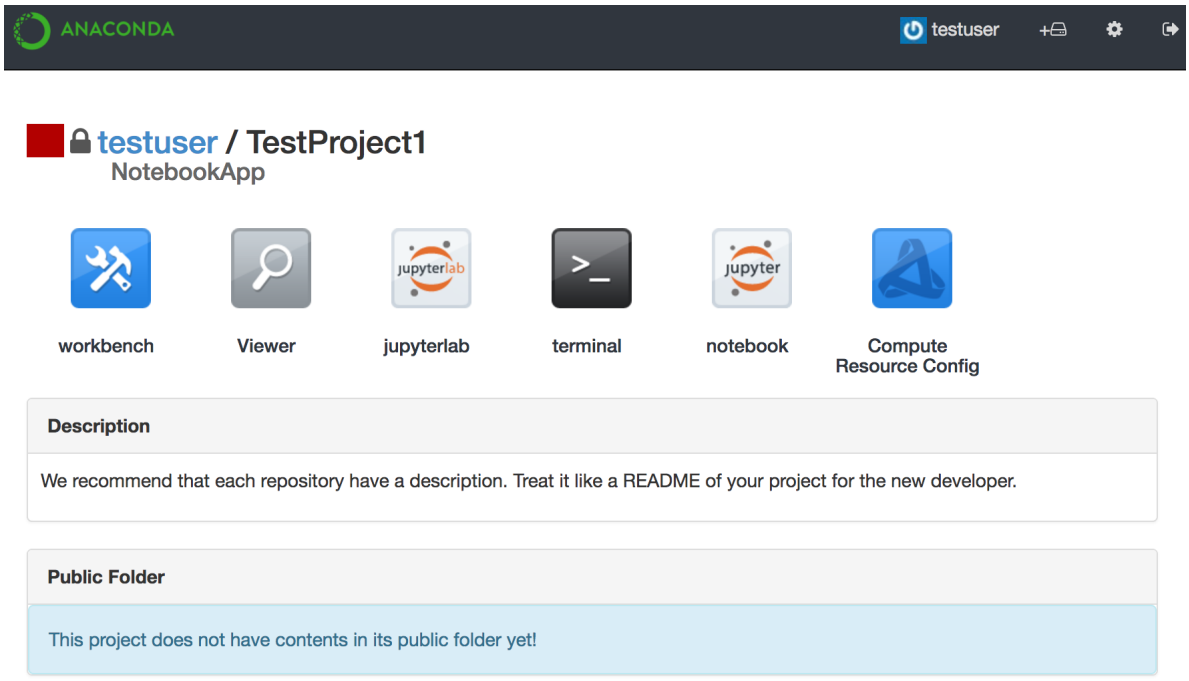


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

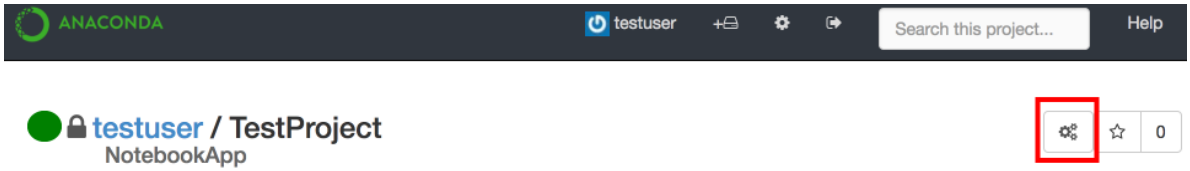
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

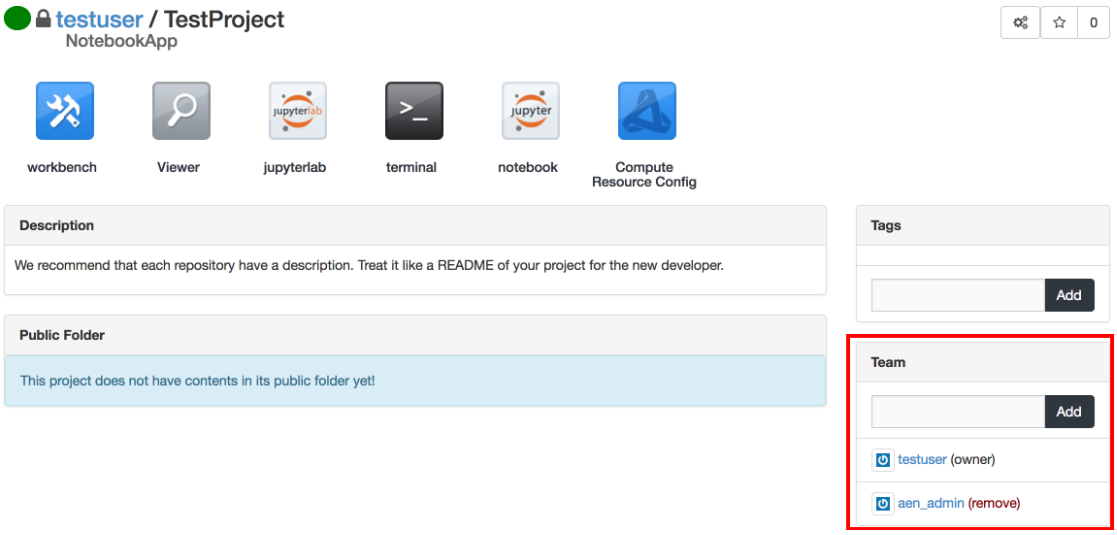
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

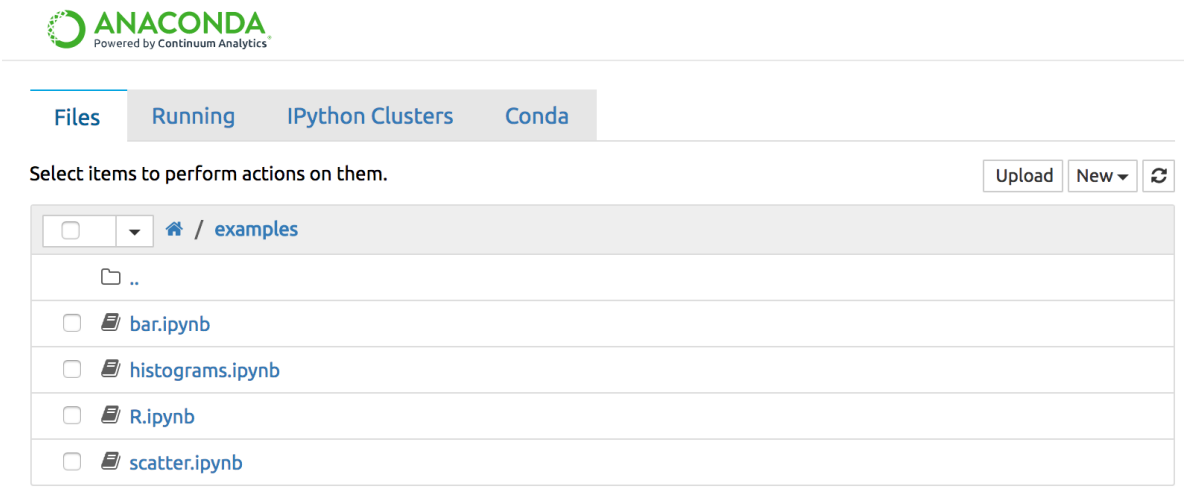


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

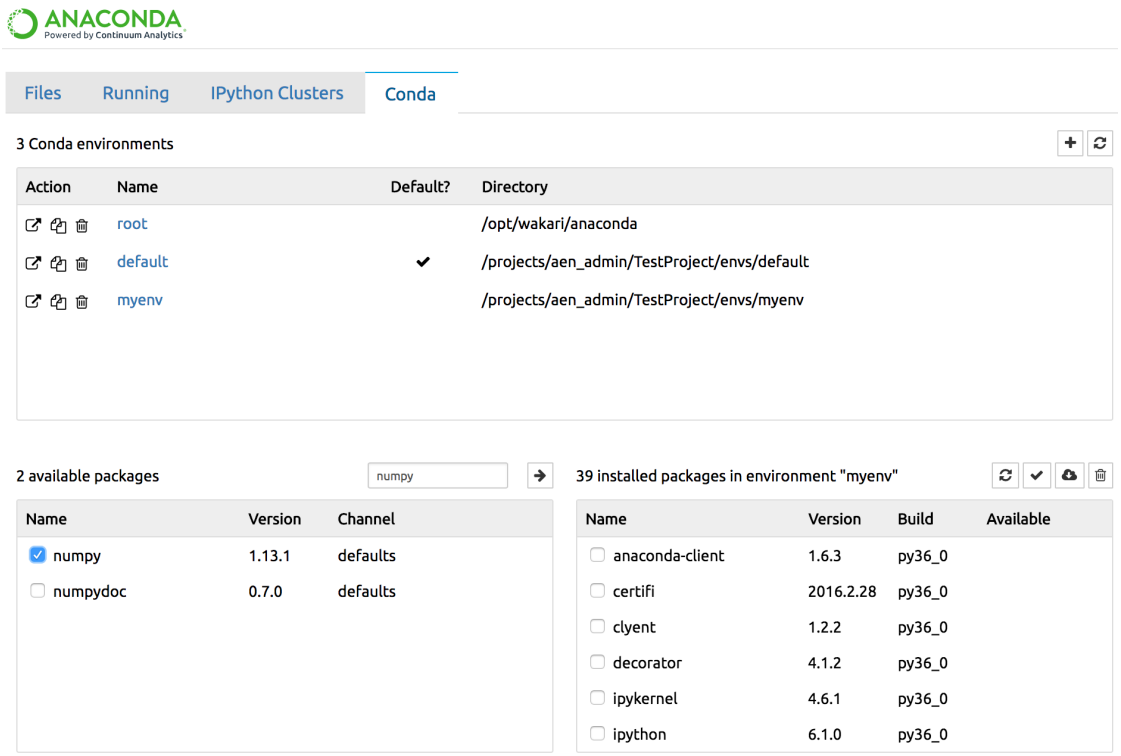
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



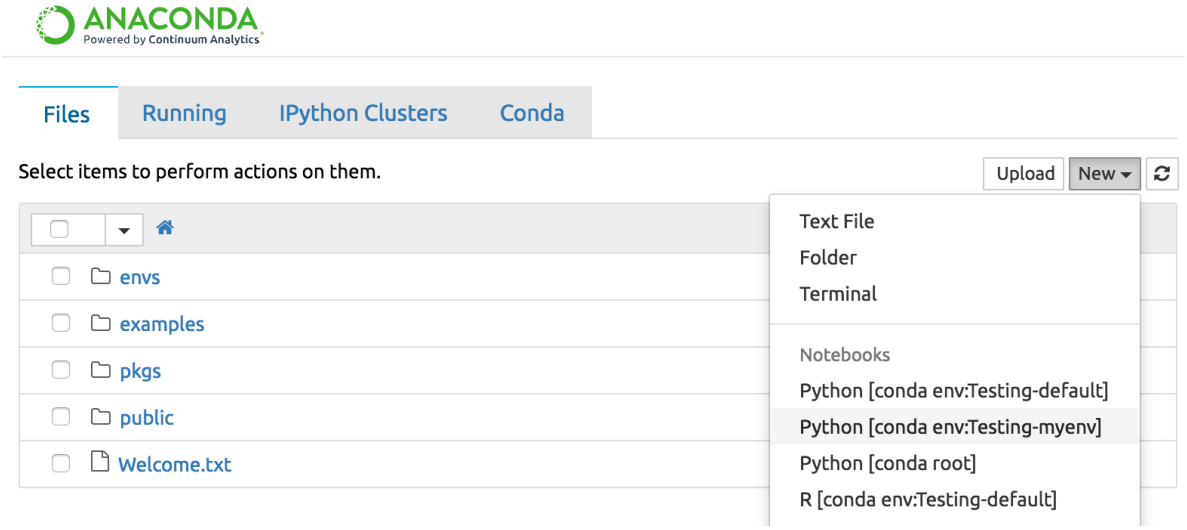
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



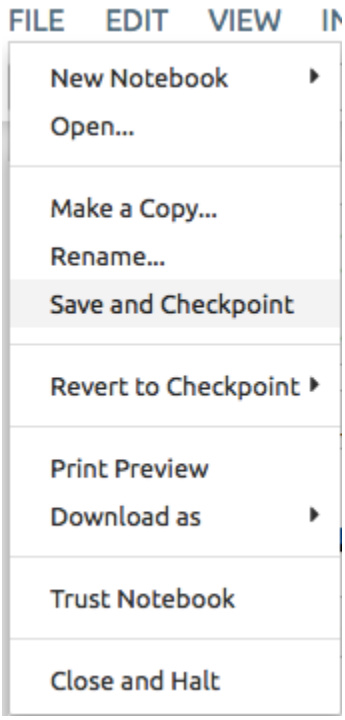
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

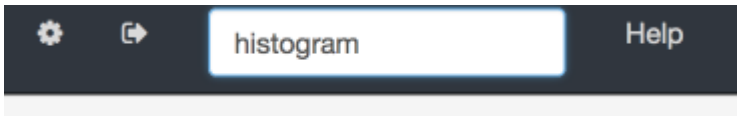
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

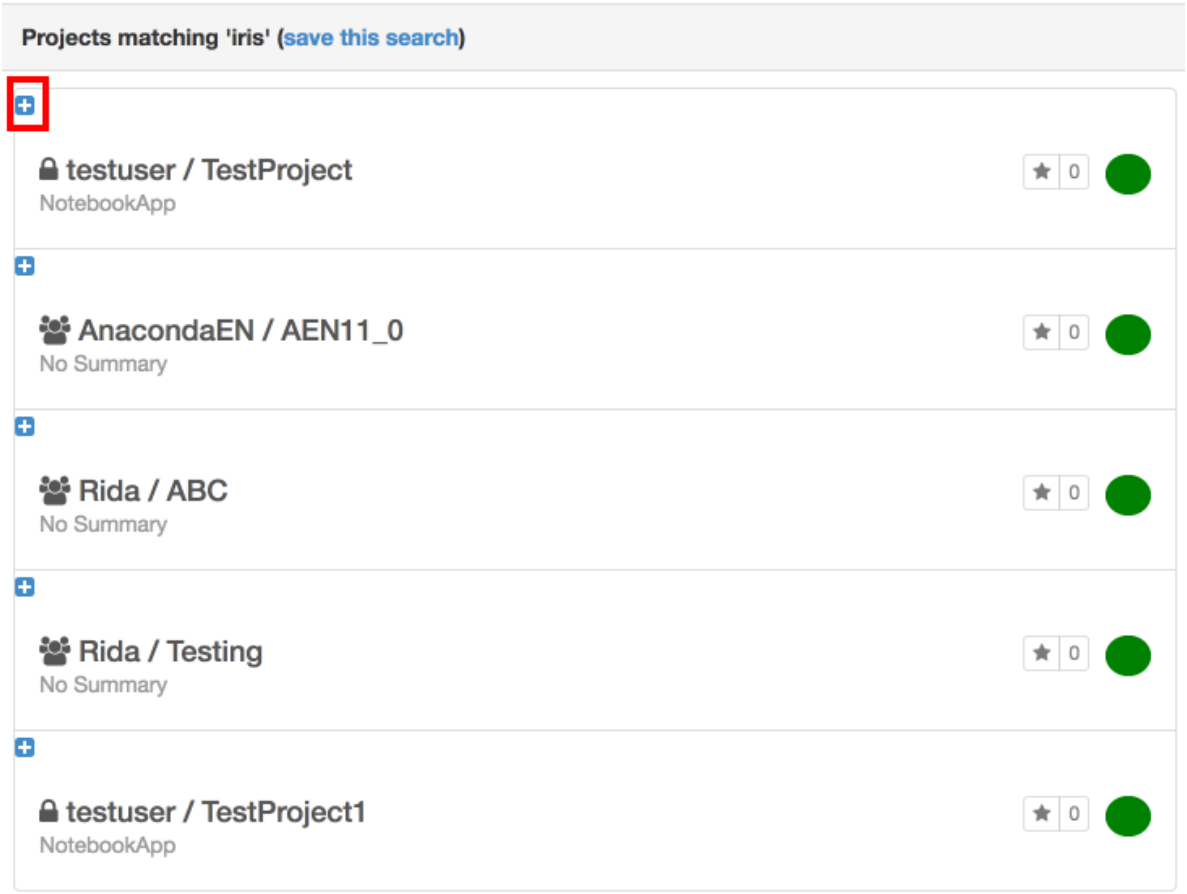
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

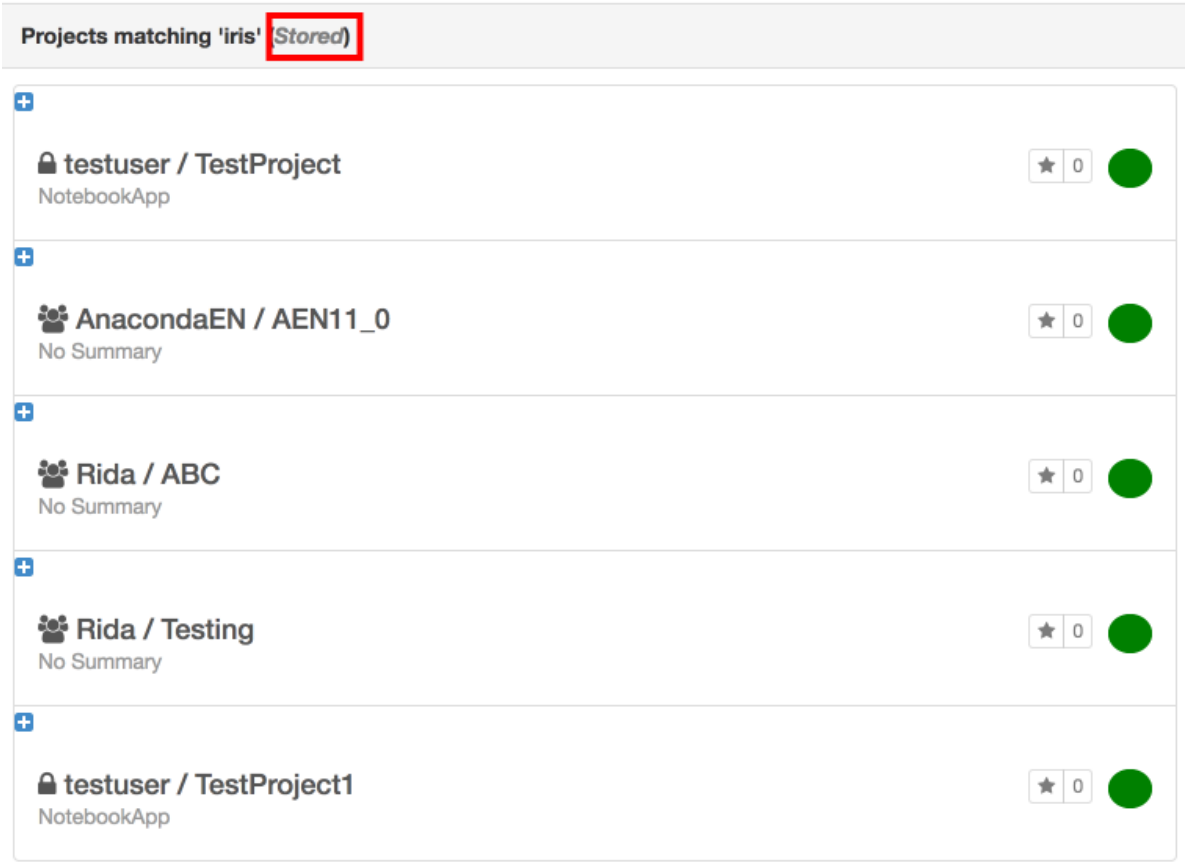


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

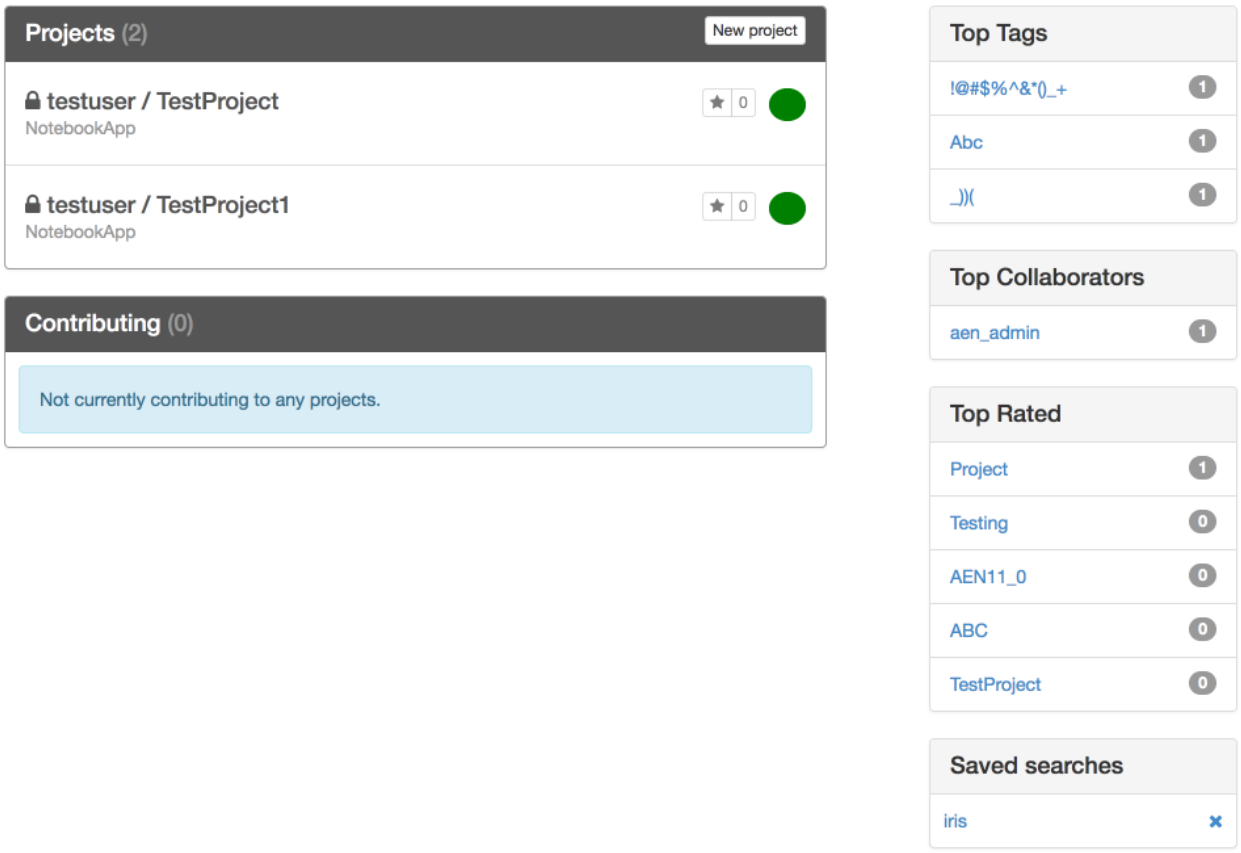
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

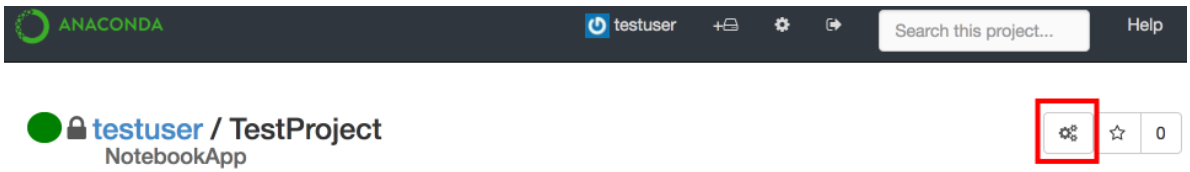
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:

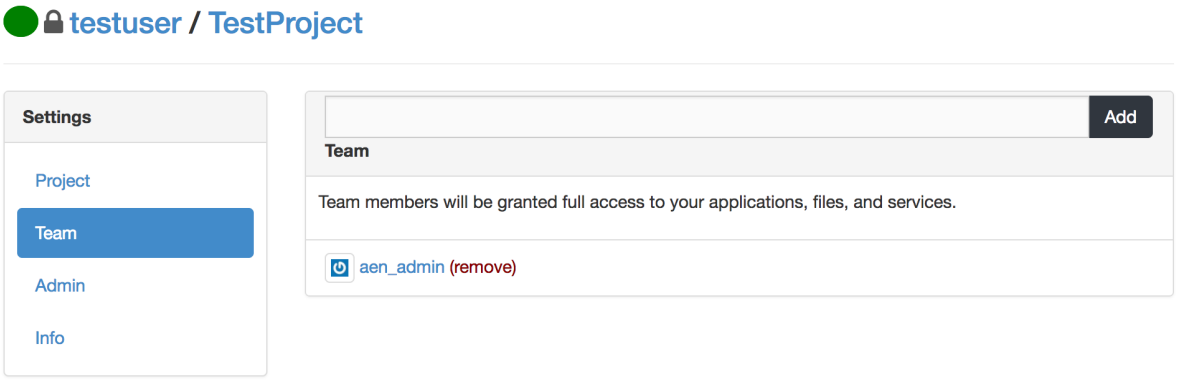


Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.



Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

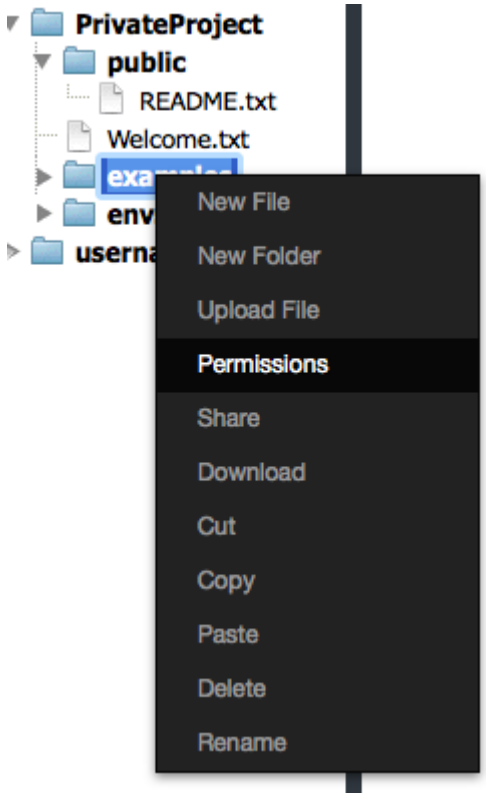
By default, all of the team members on a project have read and write access permissions for all project assets.

The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

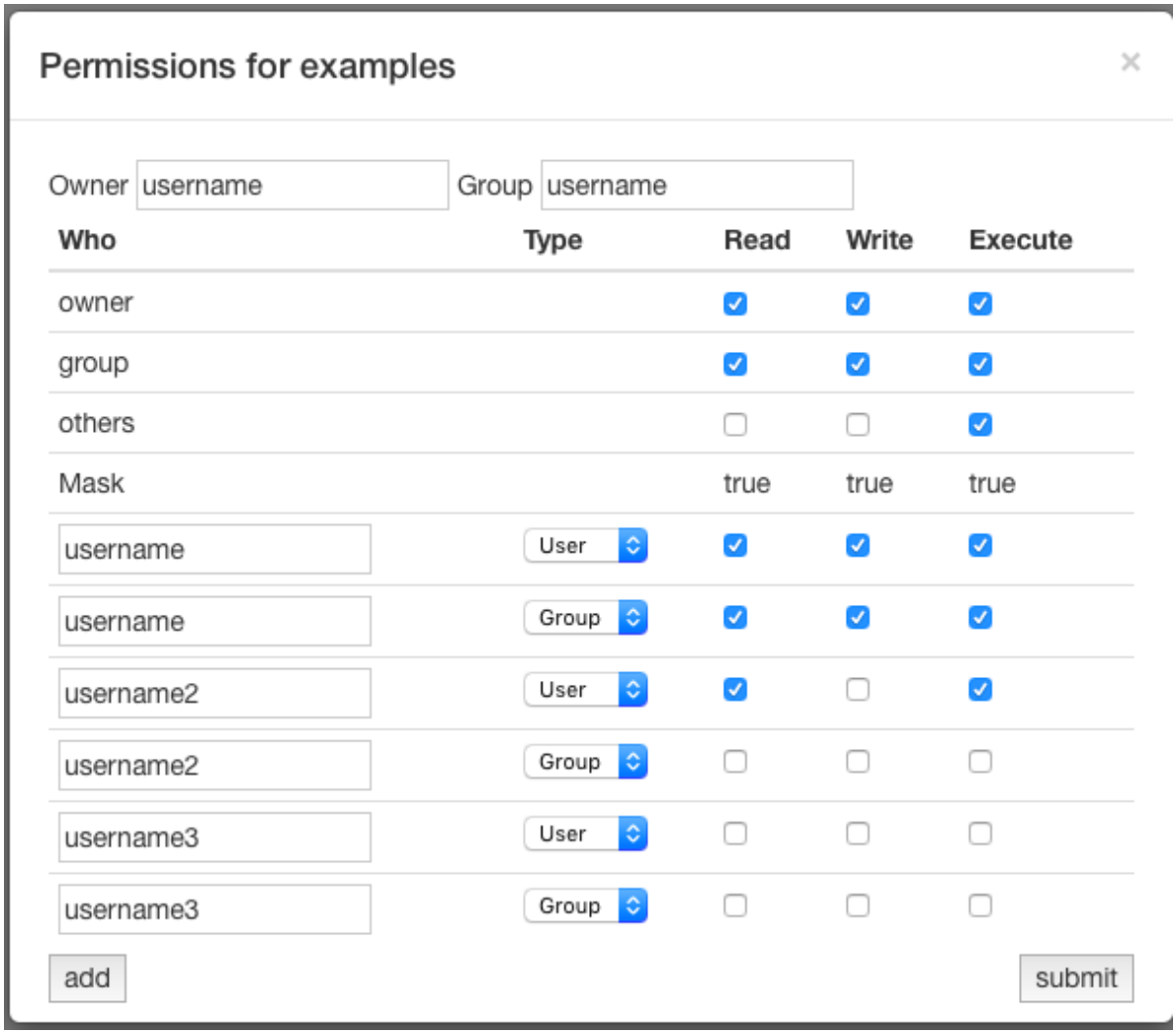
1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.
4. In the menu that displays, select Permissions:



A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

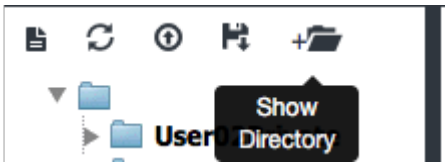
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

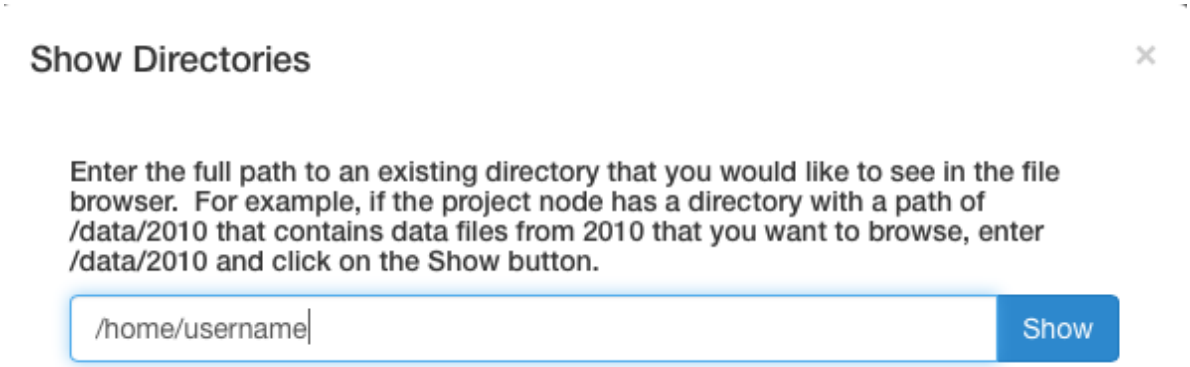
1. Click the Show Directory button at the top of the Workbench File Manager:



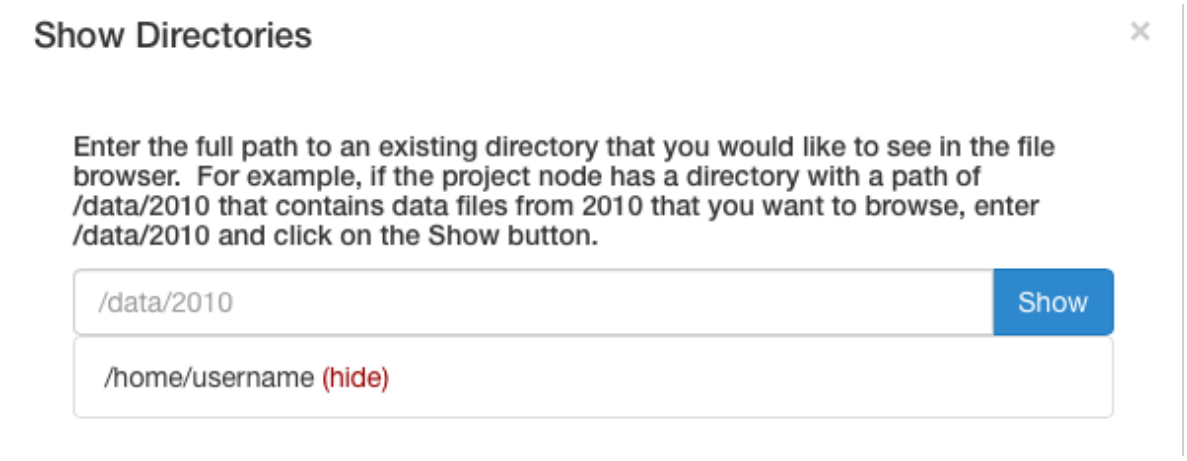
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.

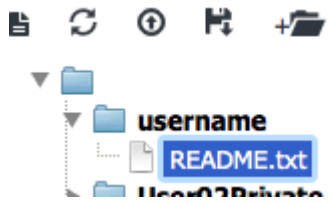


3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

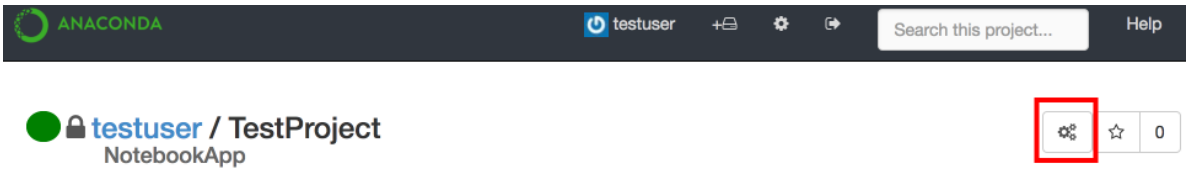
   The shared file is displayed in the File Manager:



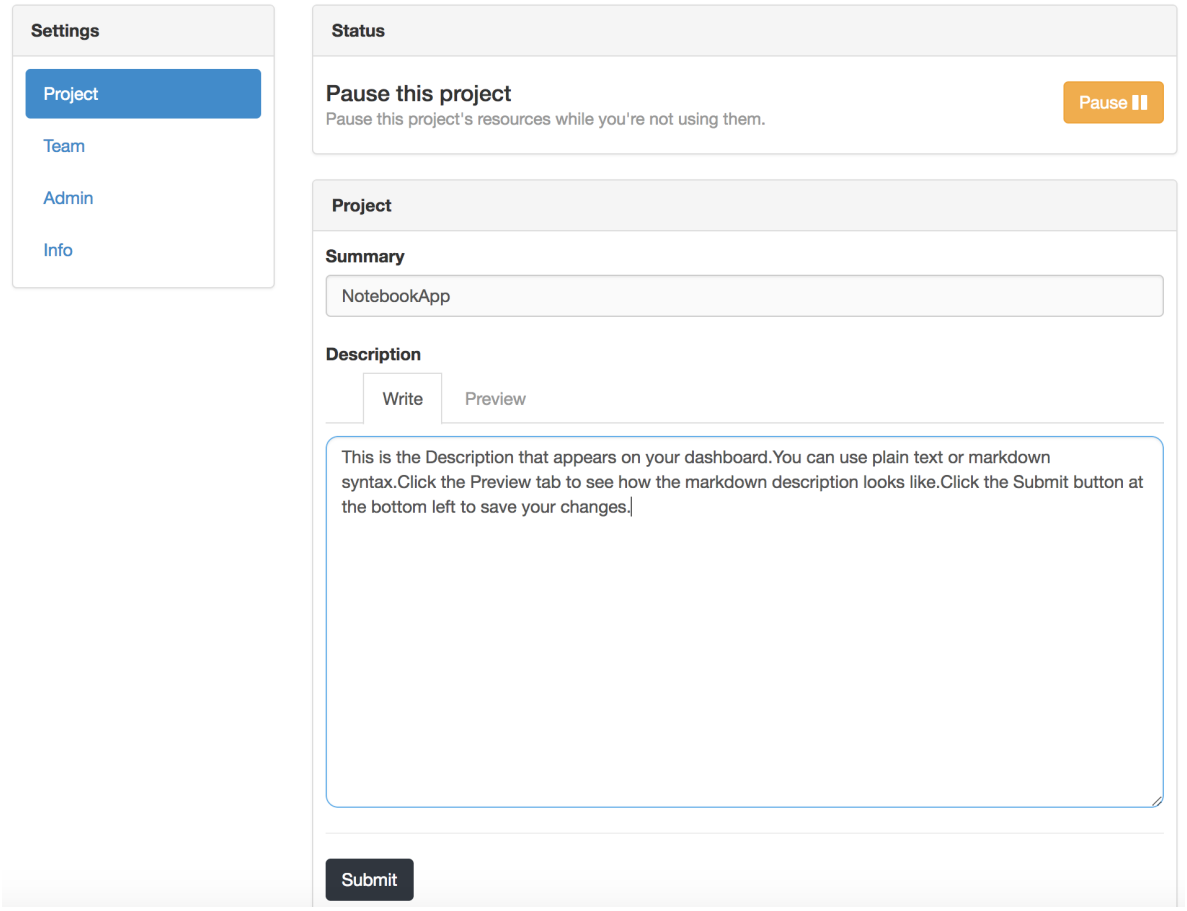
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



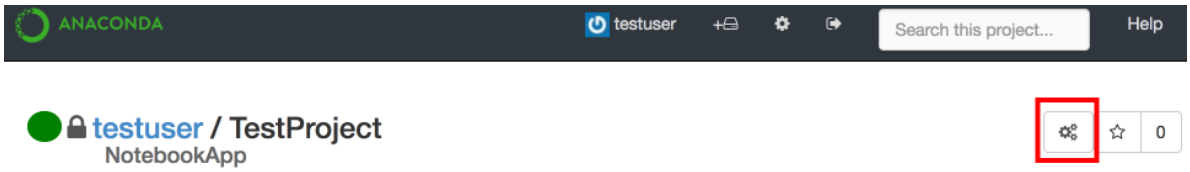
2. In the **Settings** menu, select Project.



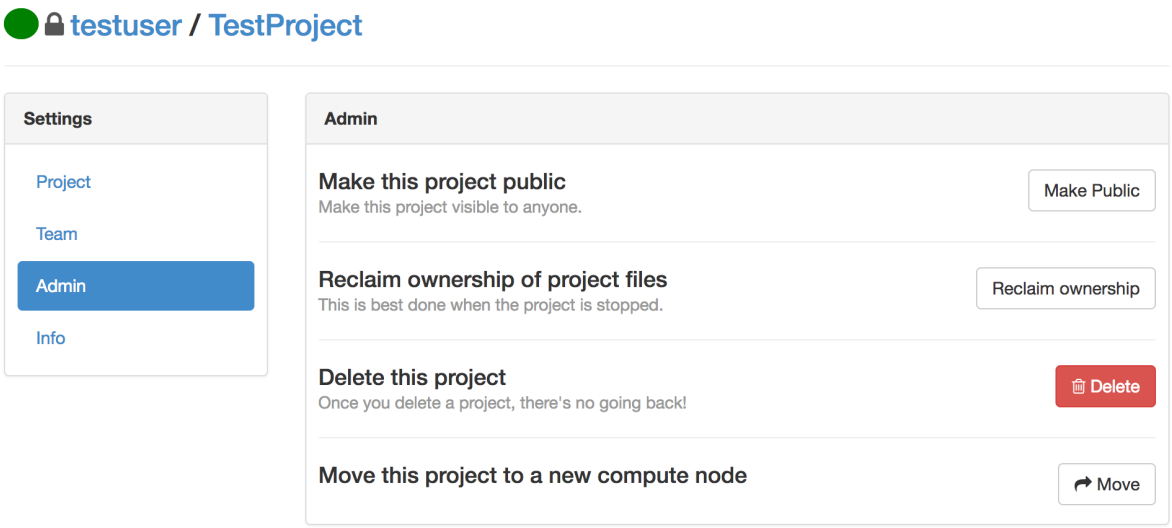
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



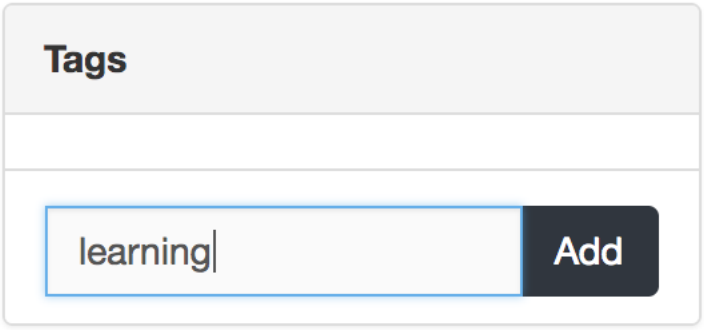
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

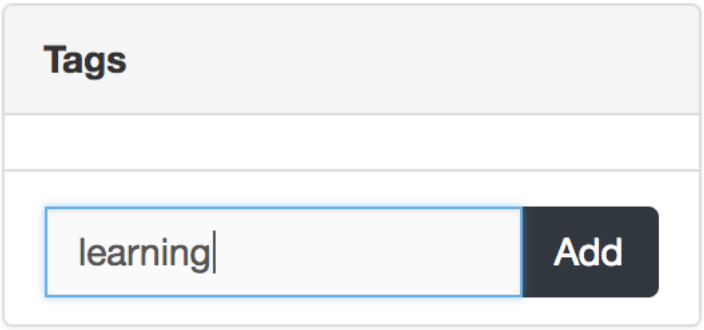
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

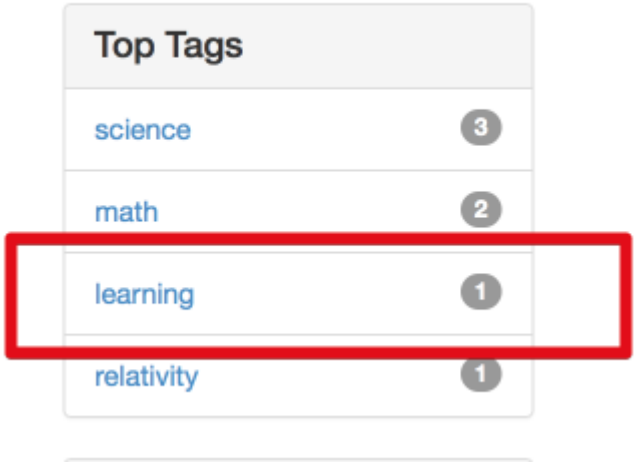


2. Click the Add button.

   The new tag is added to the Tags list:

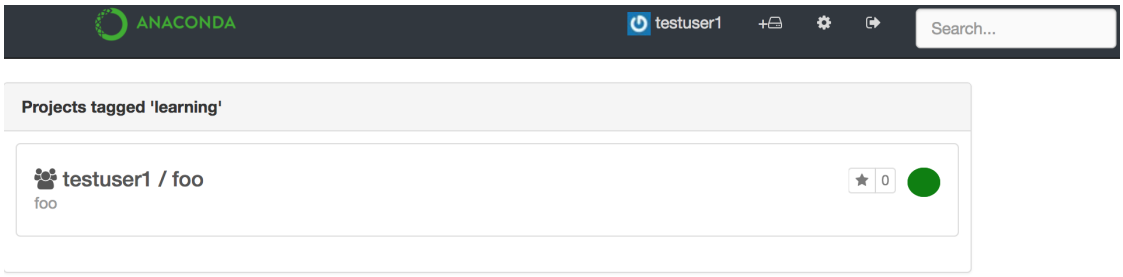


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



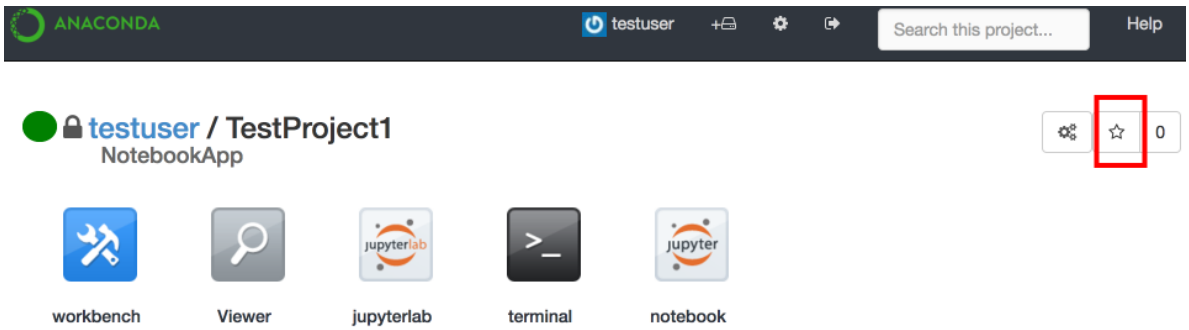
1. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

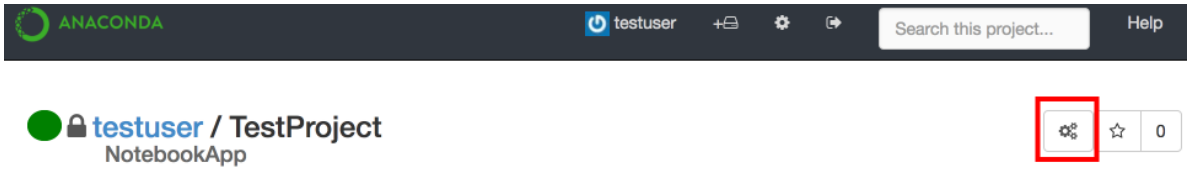


3. To unstar a project, click the Star icon again.

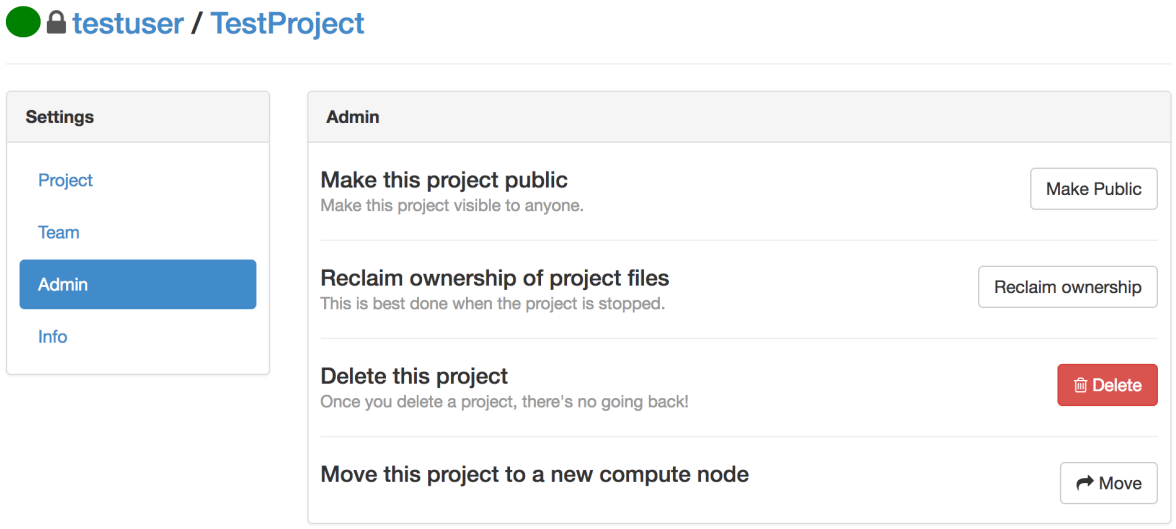
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



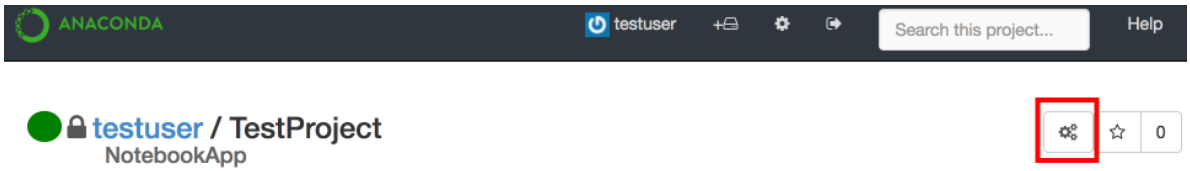
3. In the **Settings** menu, select Admin.



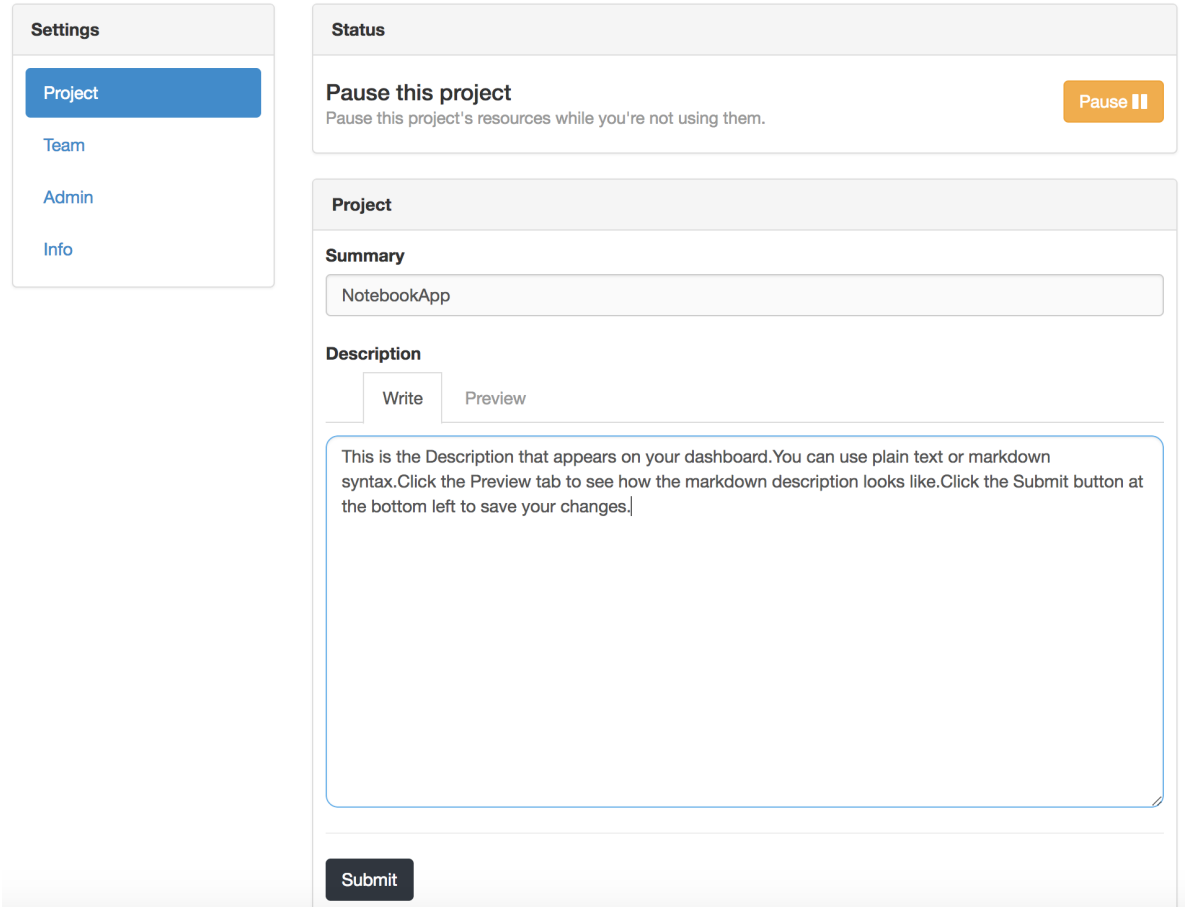
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



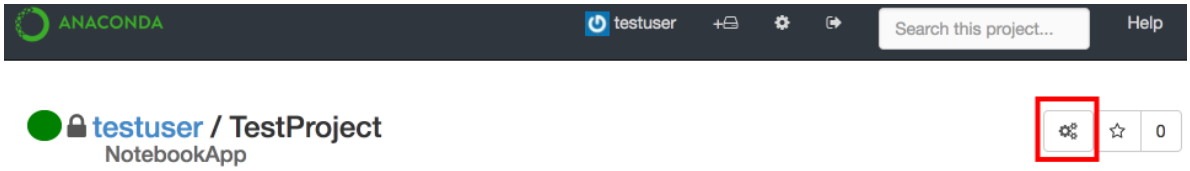
2. In the **Settings** menu, select Project.



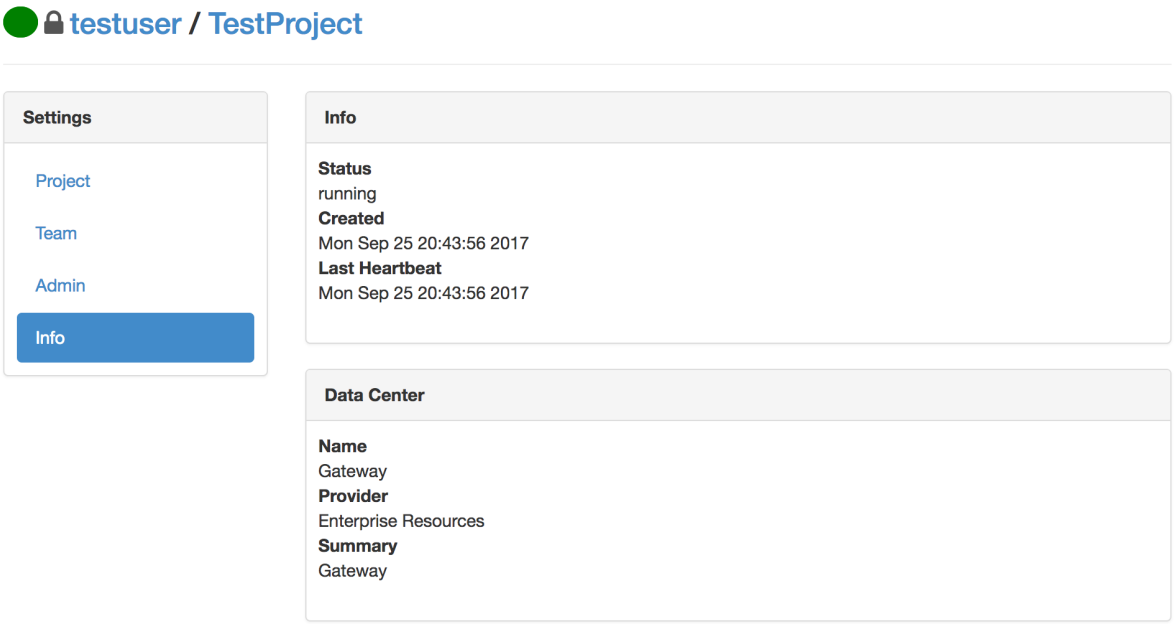
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

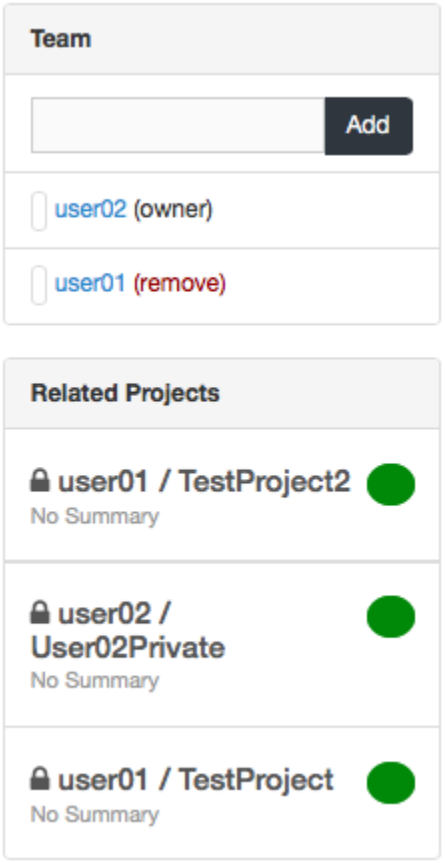


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

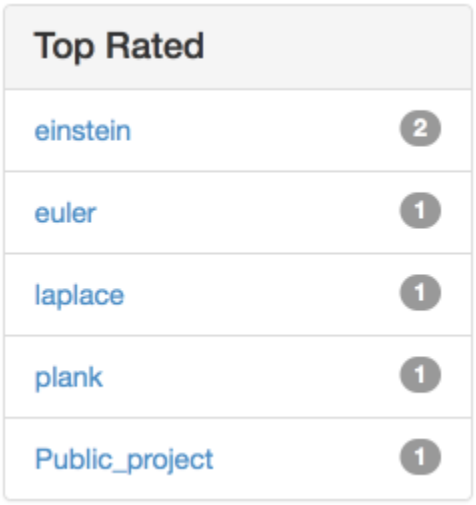
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

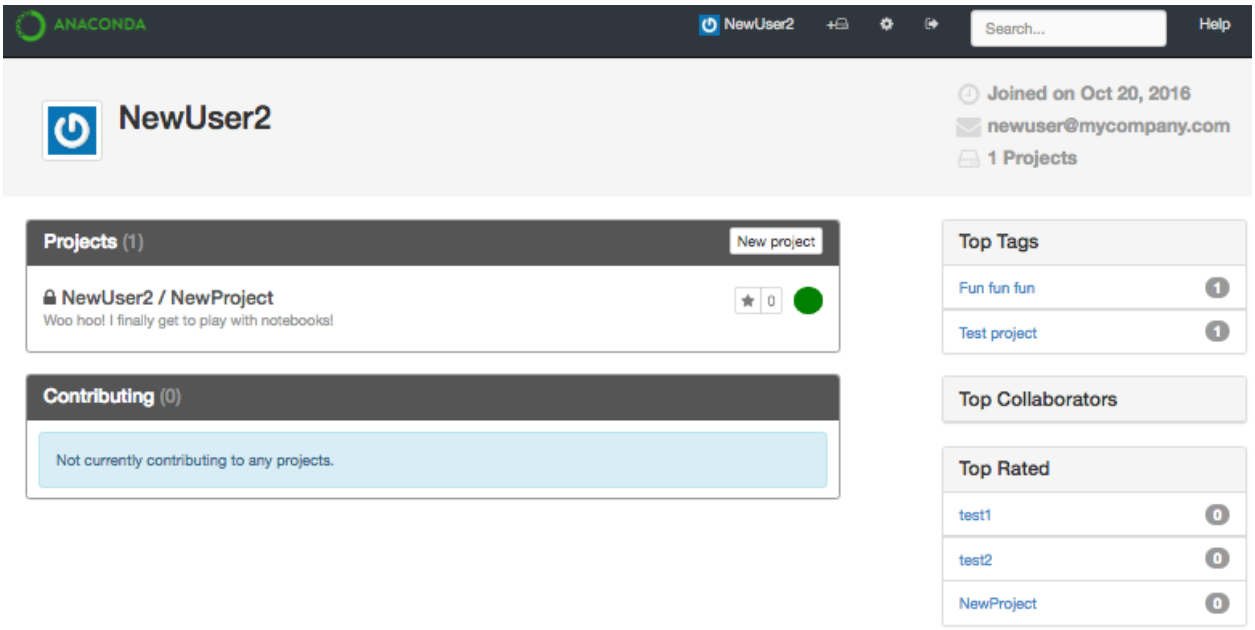


The number next to a project represents the number of stars that have been given to that project.

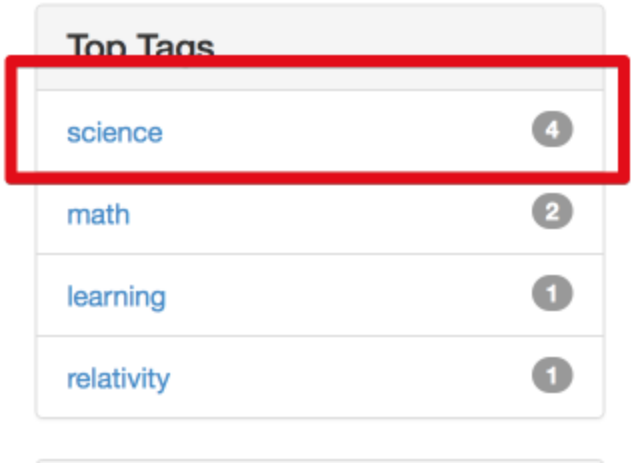
Click a project name to view the project's home page.

Using tags to find a project

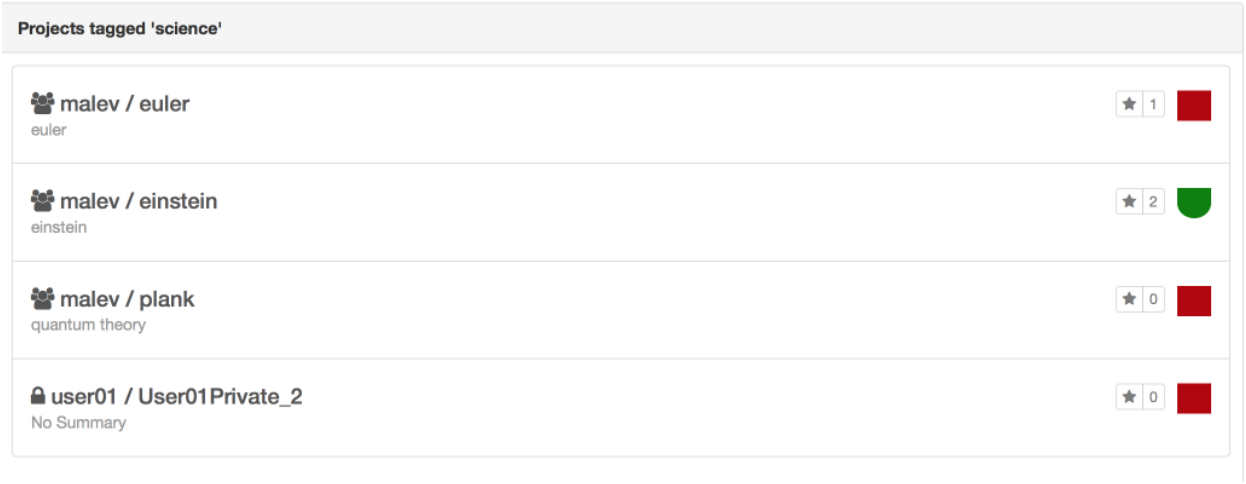
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

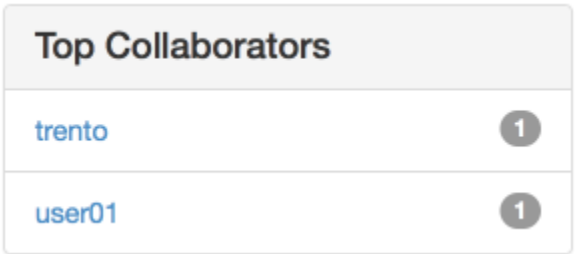


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

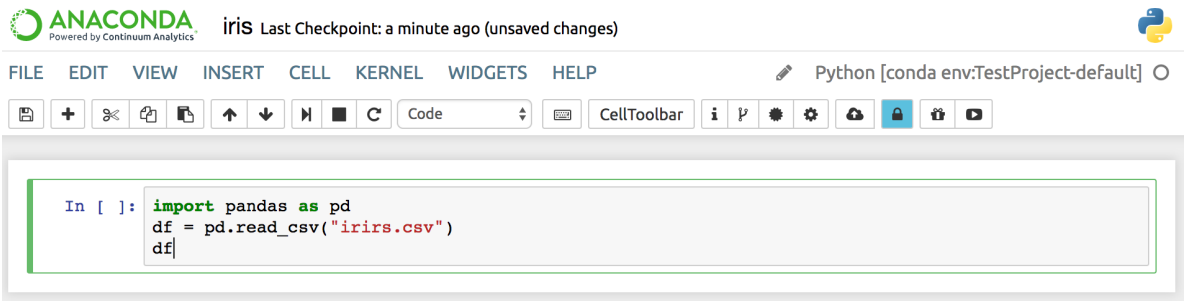
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

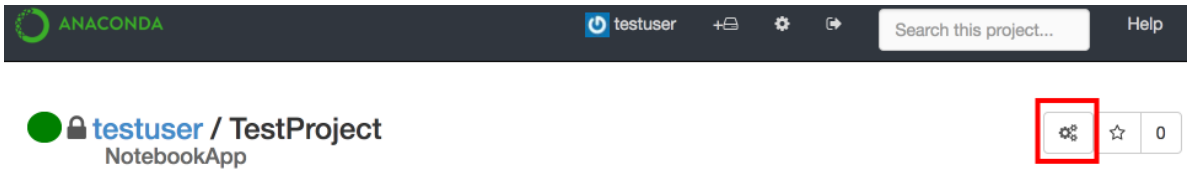
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

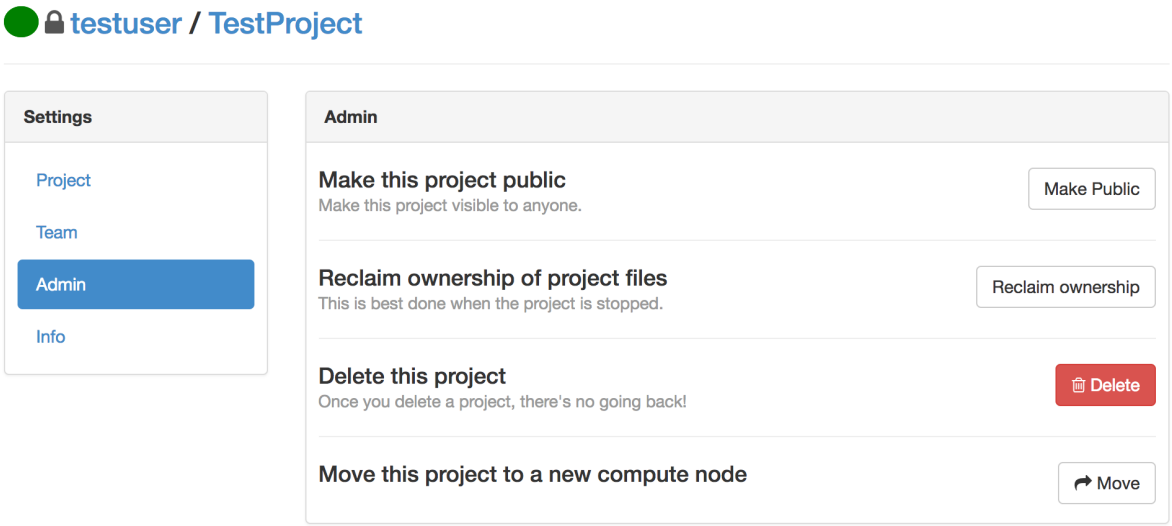
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



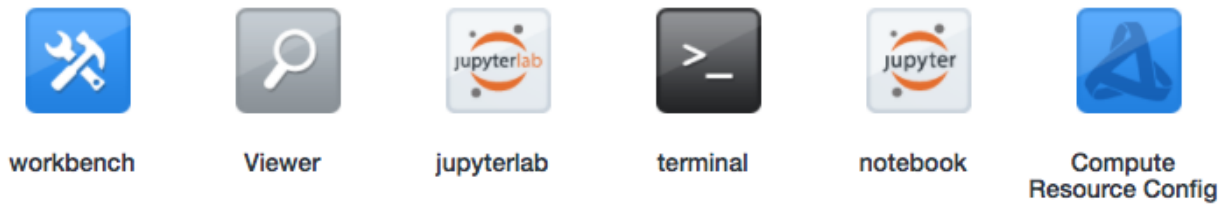
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Using Workbench

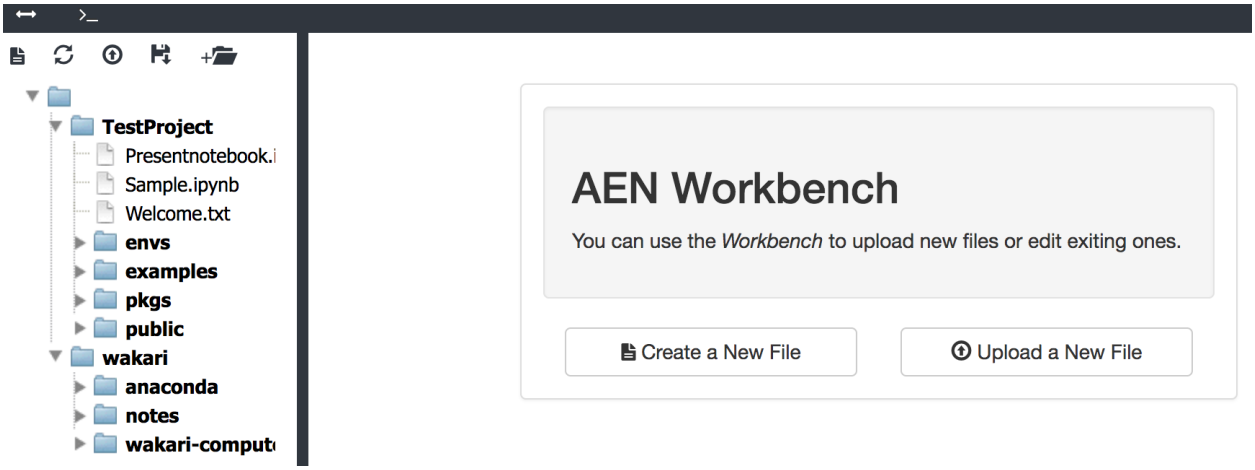
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.
- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

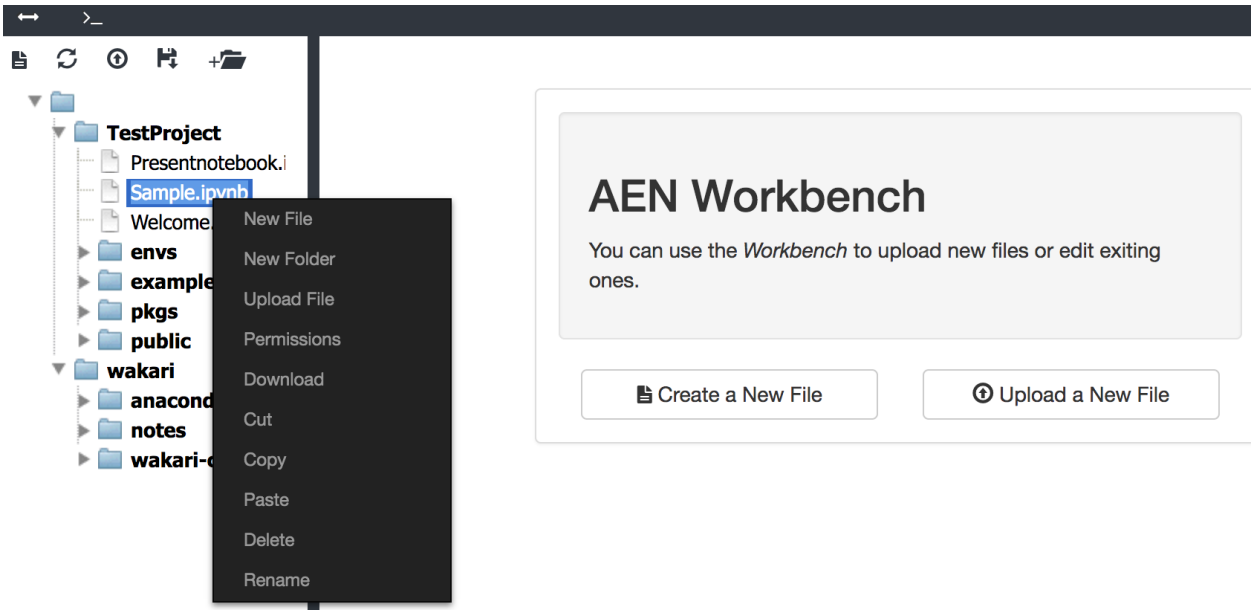
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

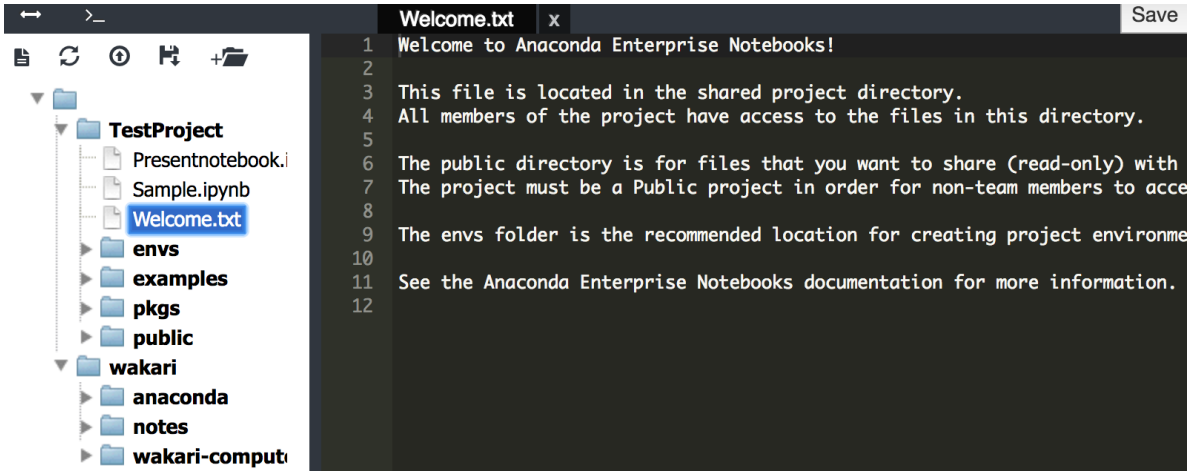
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

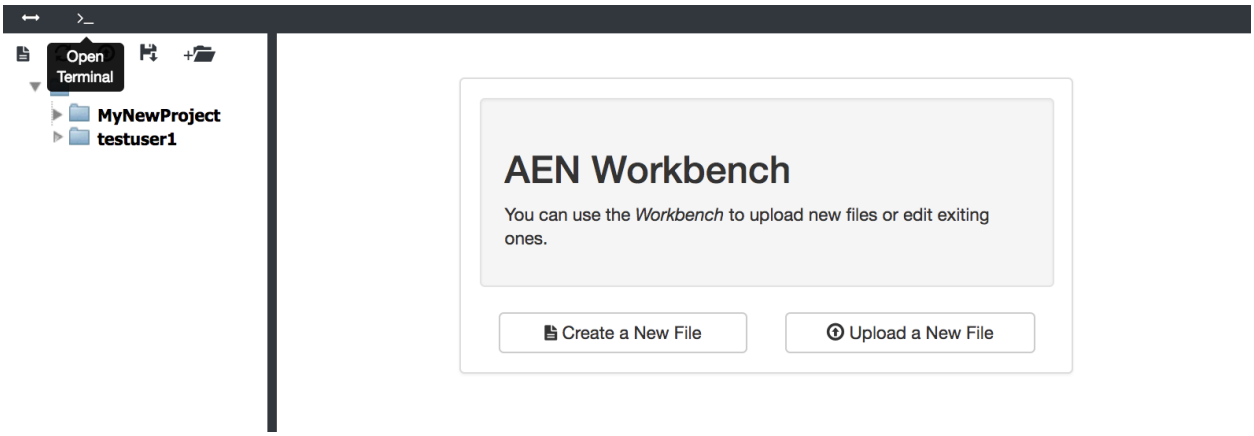


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

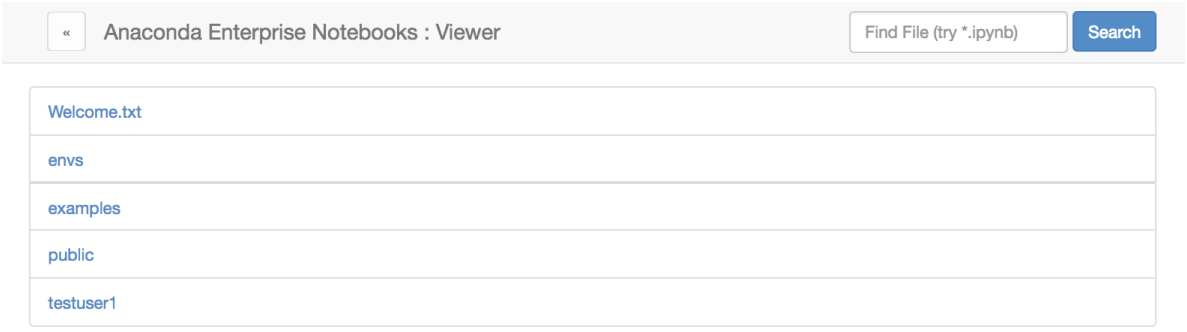
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

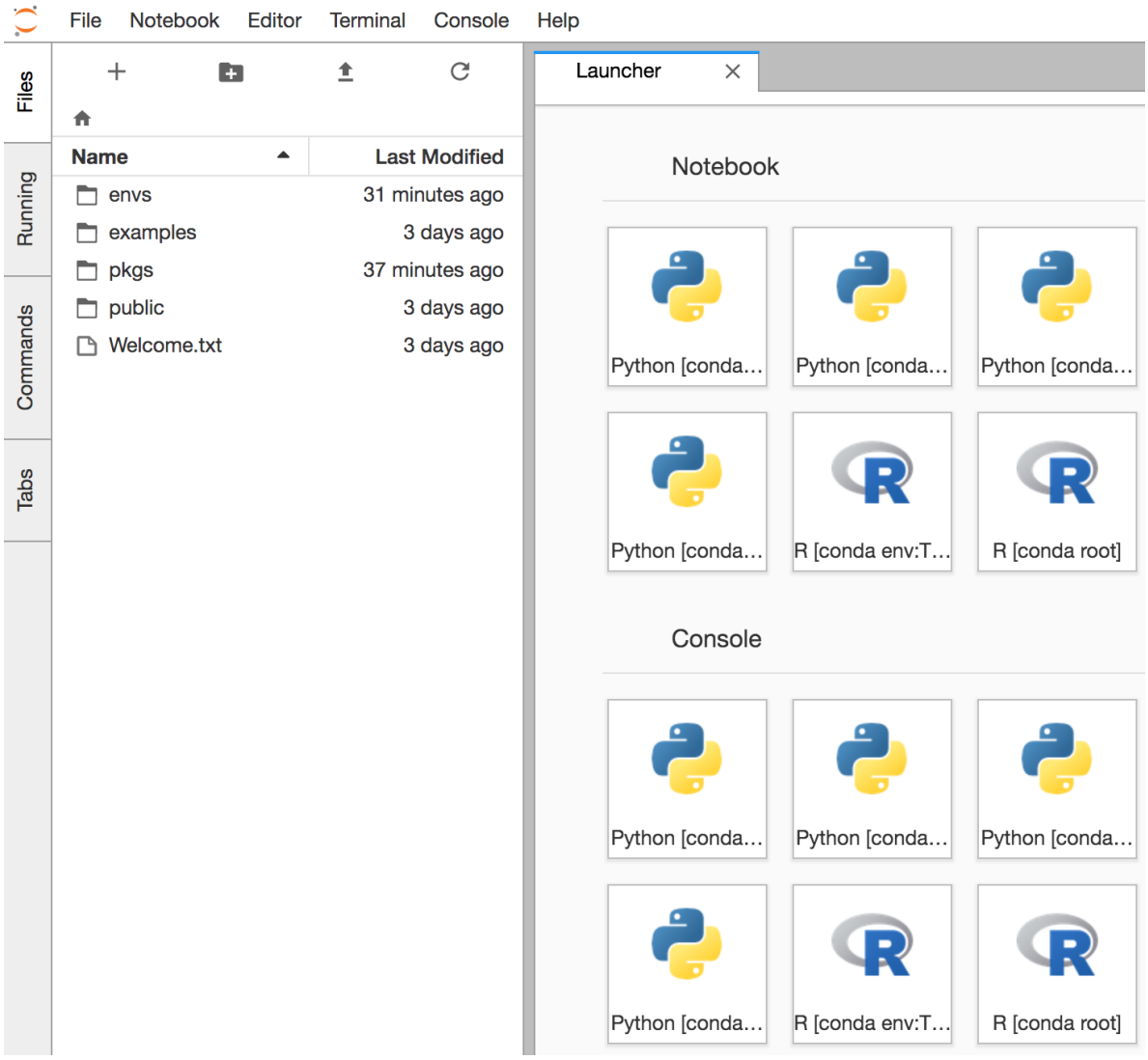
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:

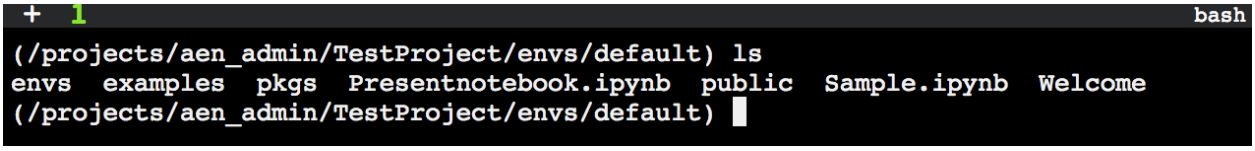


Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:



Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

   Terminal opens the project directory in a new browser window.

   By default, the project directory is `/projects/username/project-name`.

   EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

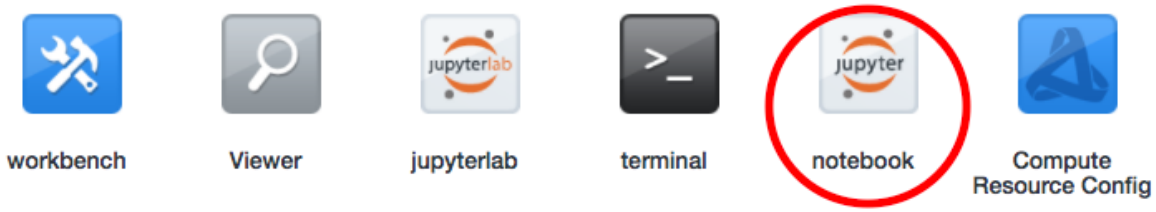
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

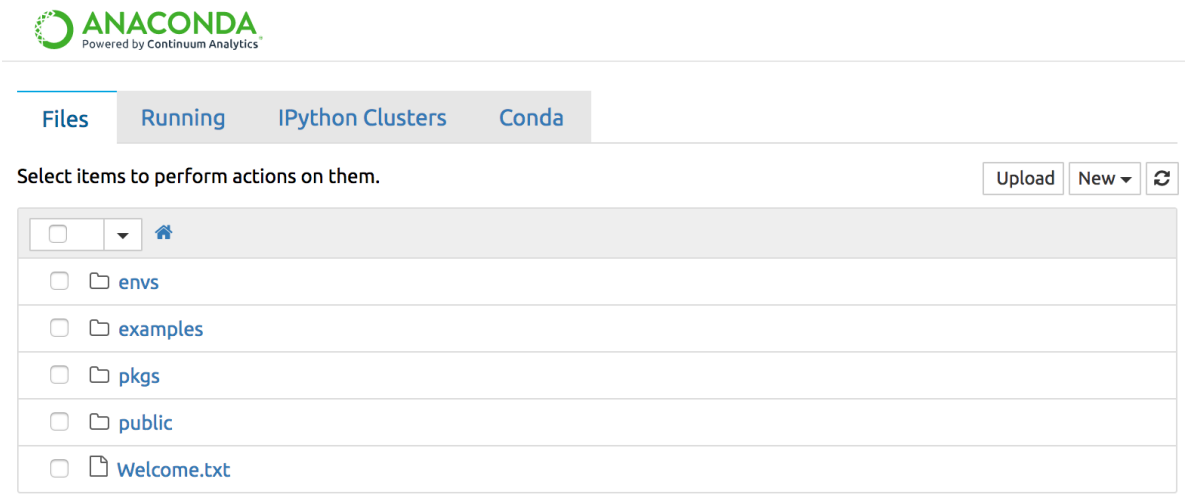
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

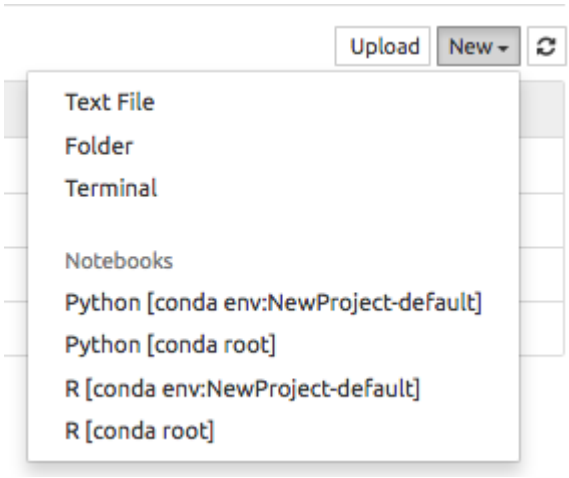
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

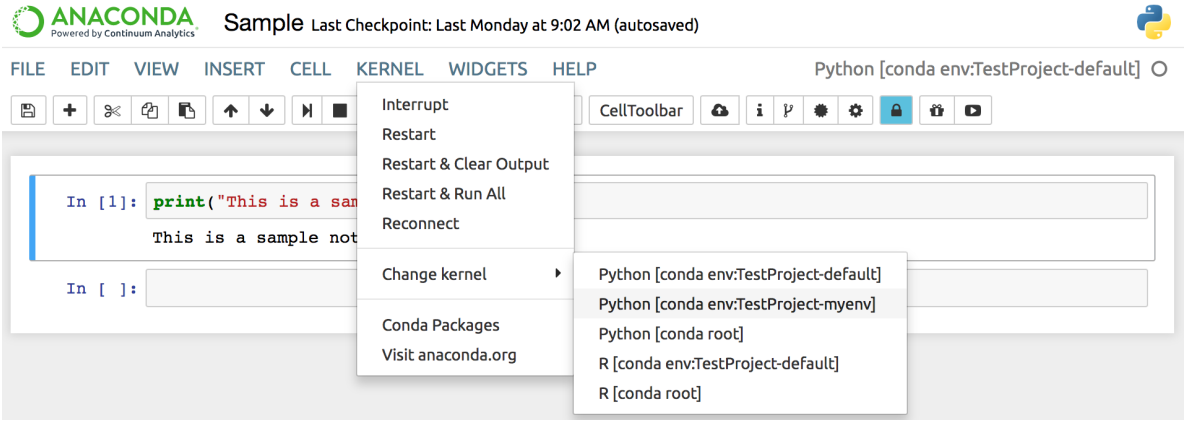
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. To prevent merge conflicts, this model uses a "latest wins" policy as its main merging strategy.

The RCM Jupyter Notebook extension adds four buttons:

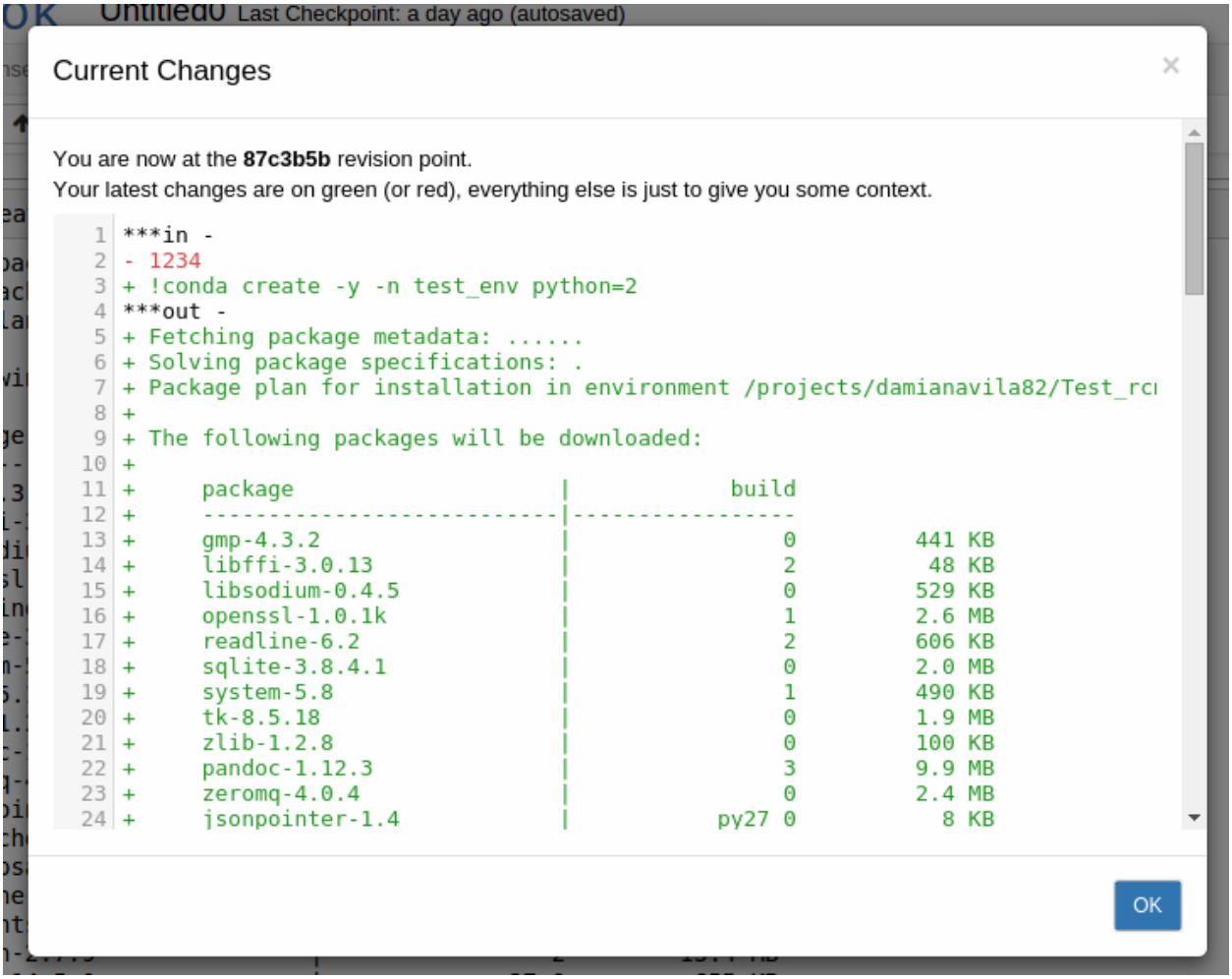
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

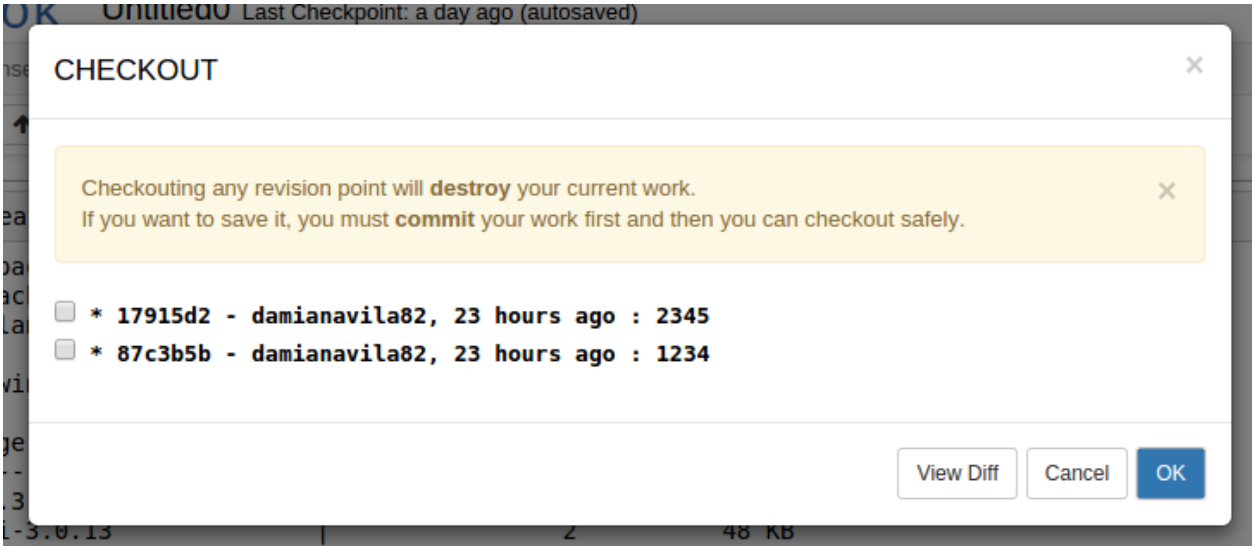
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

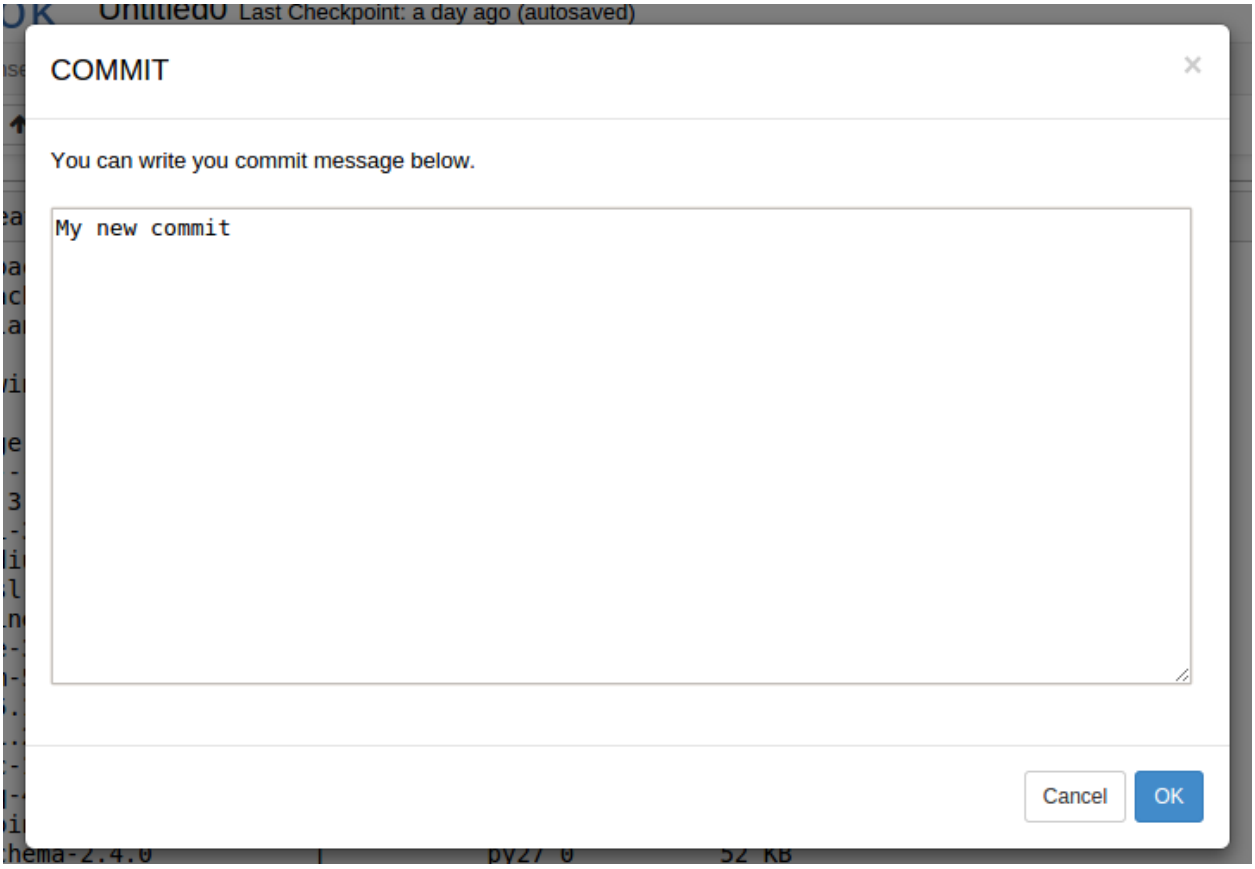
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

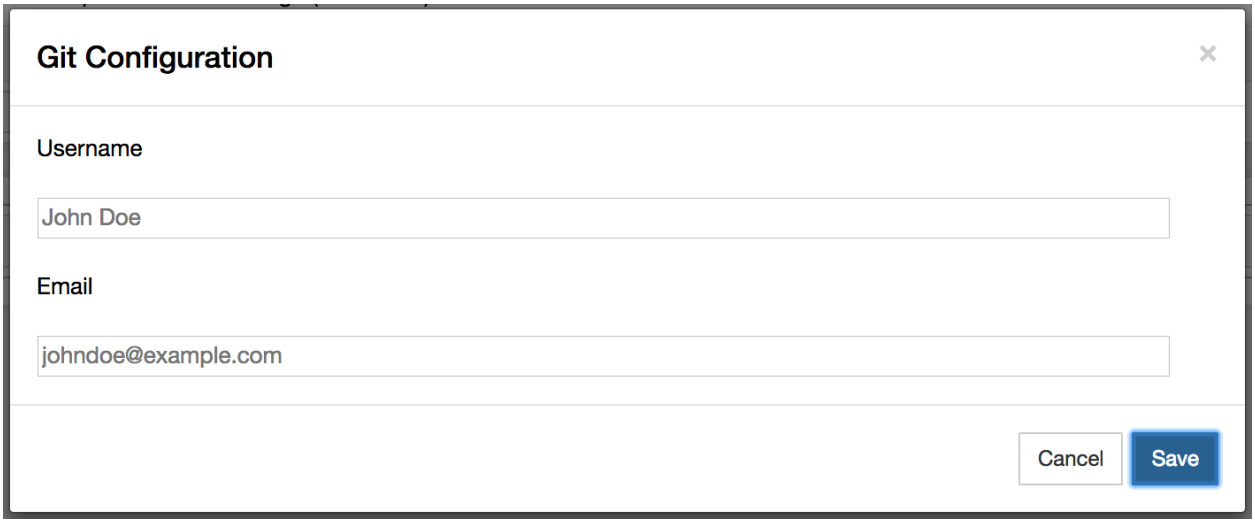
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

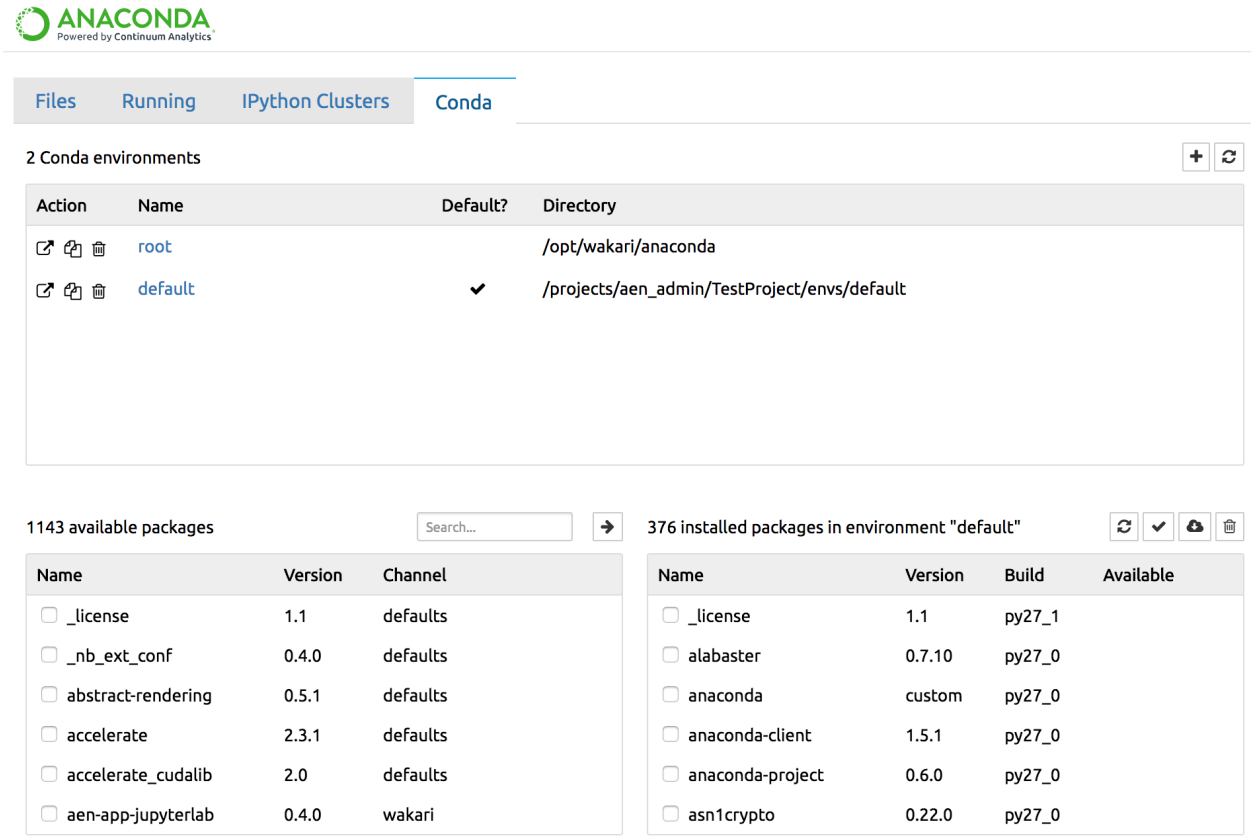
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

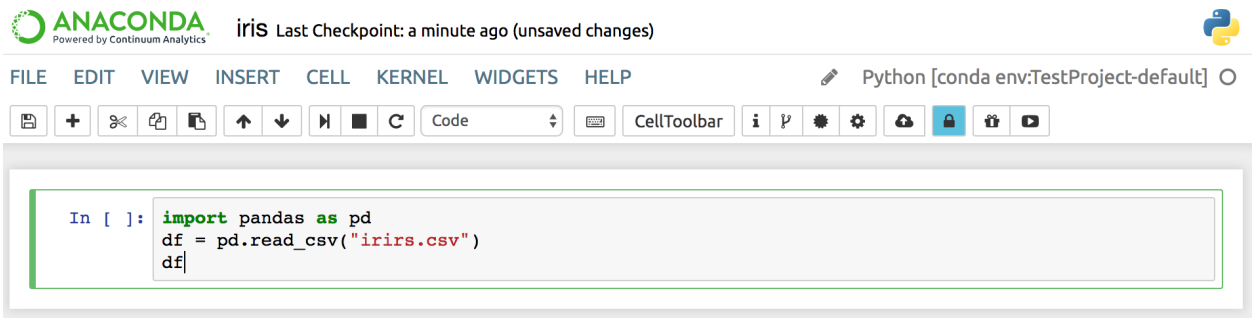
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

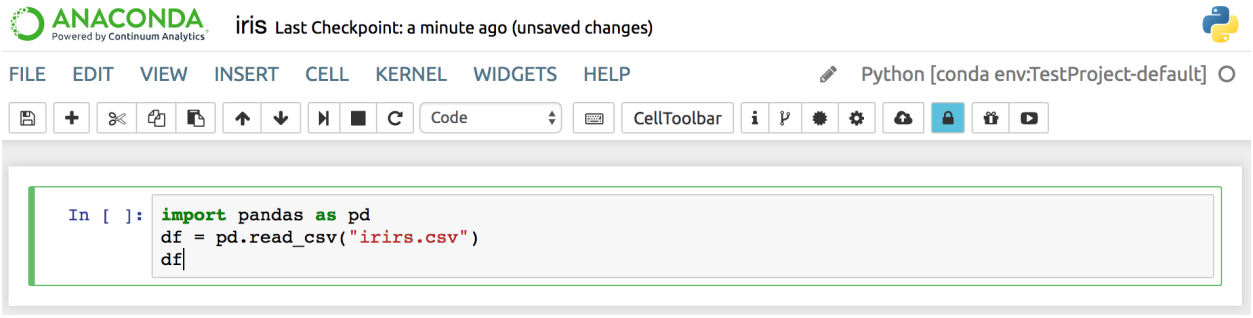
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

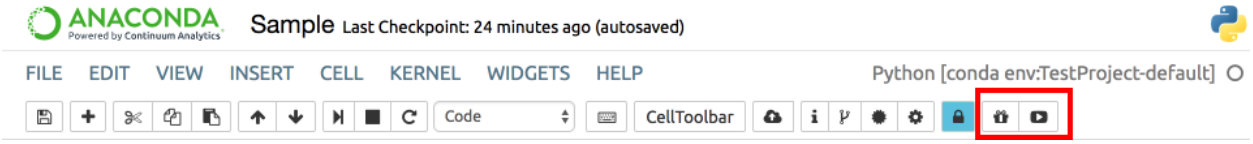
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



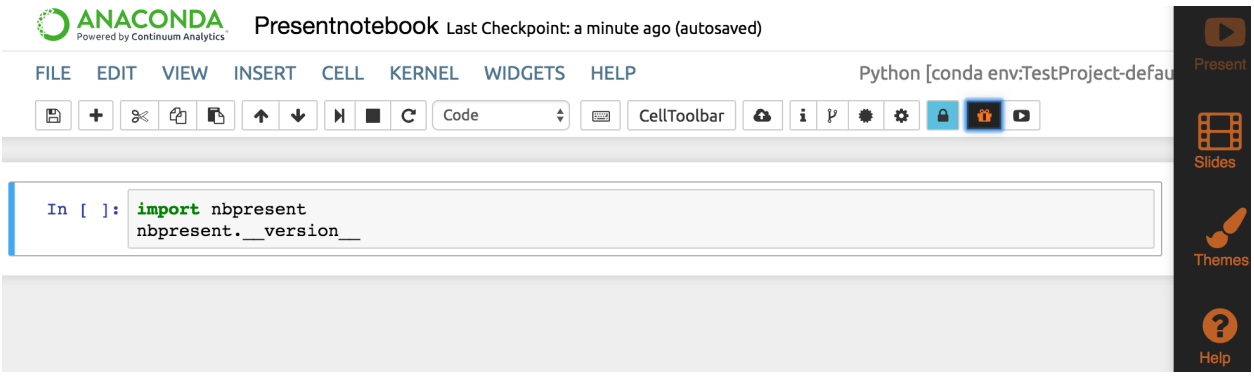
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

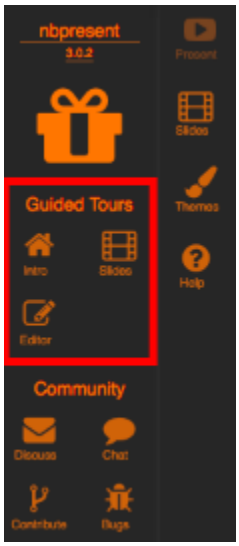


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

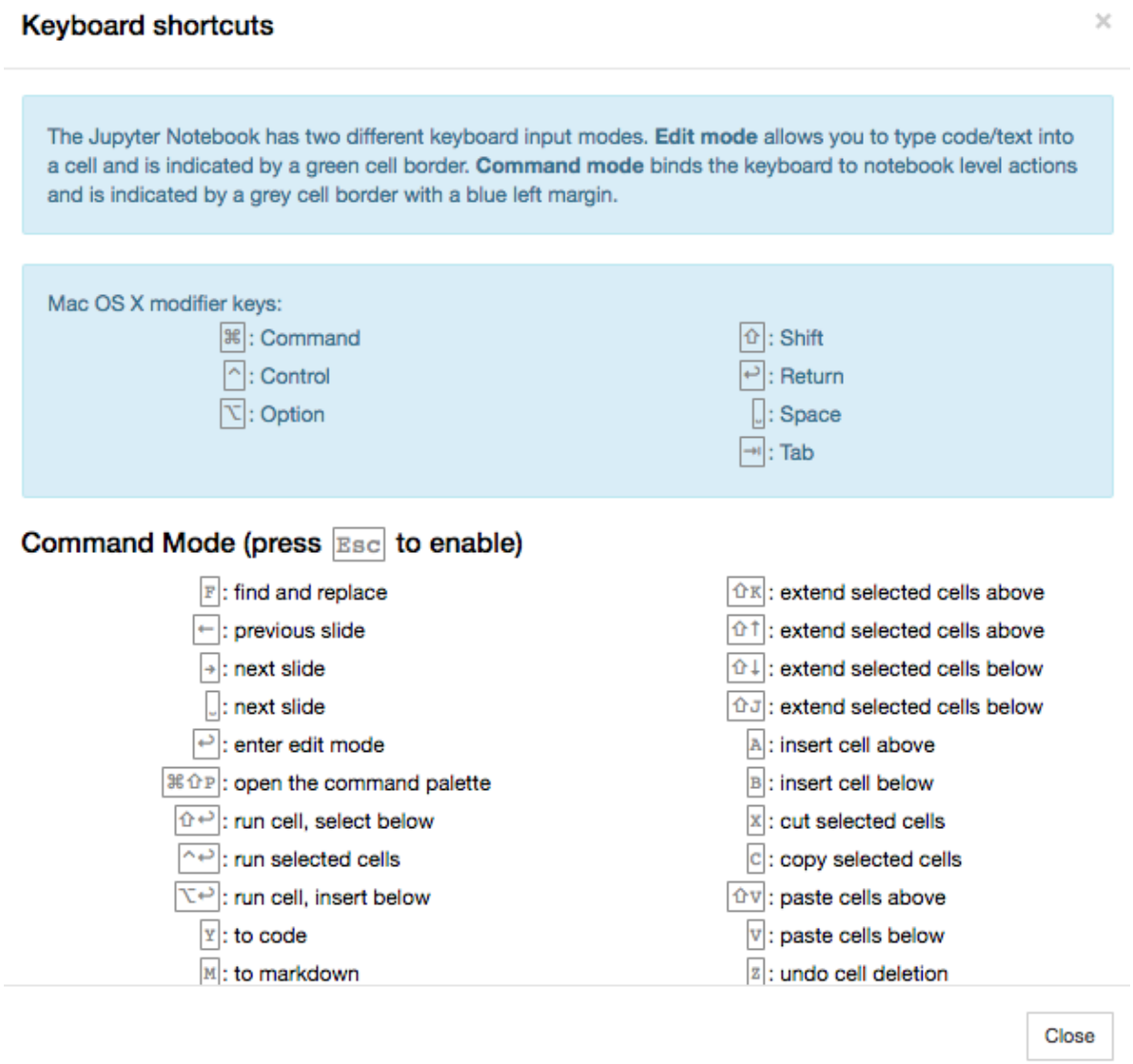
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

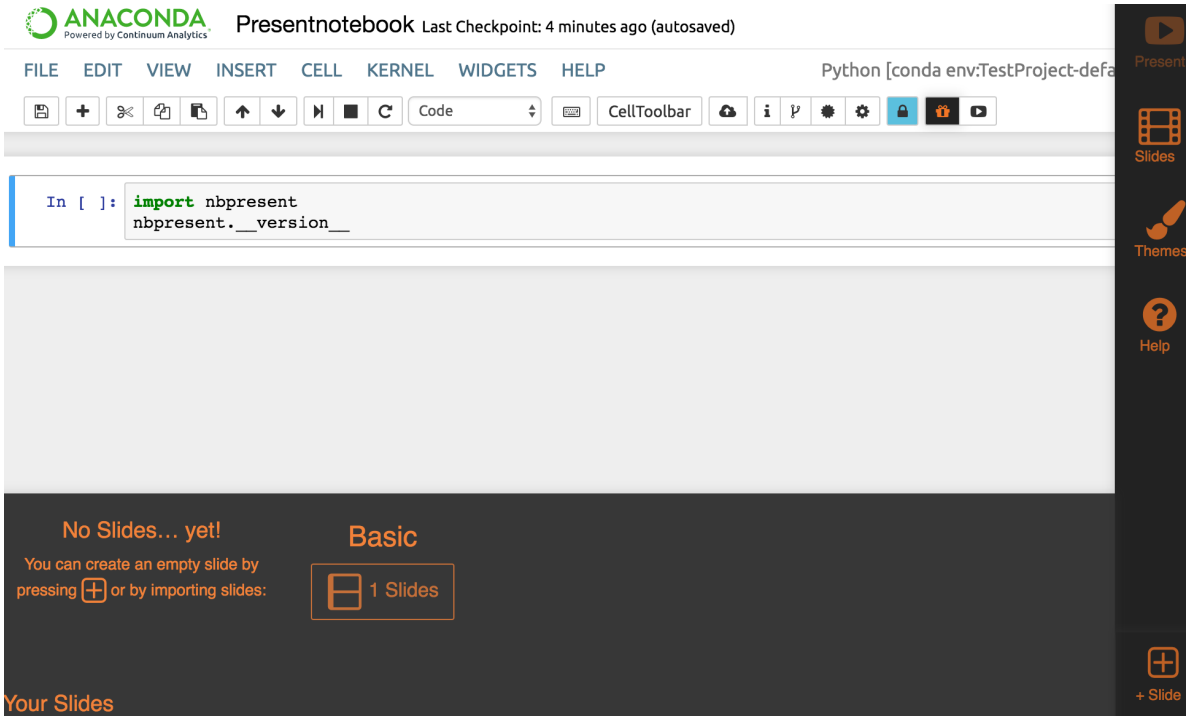
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

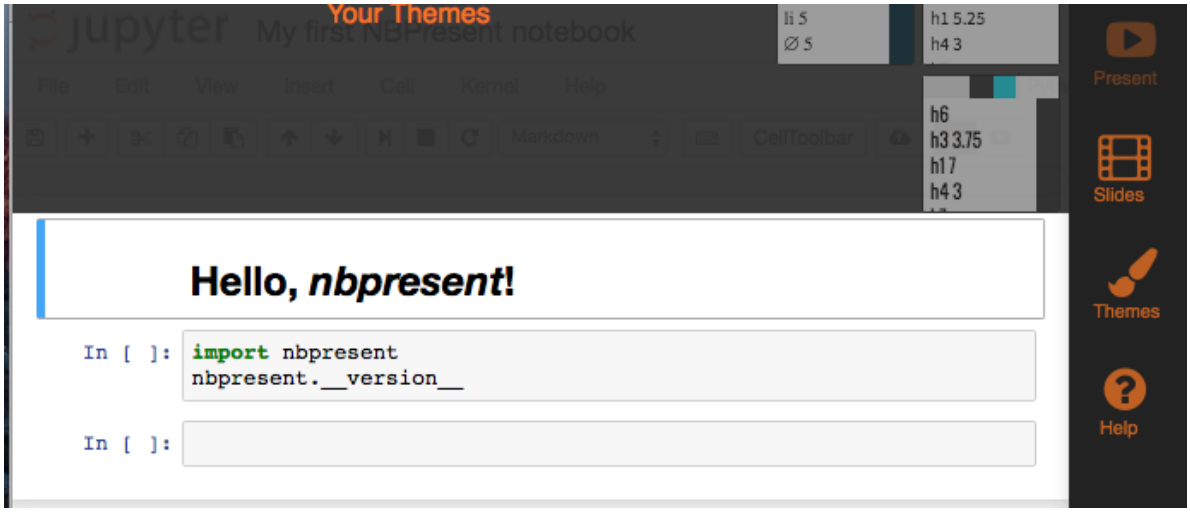
- App Bar—When Authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops Authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any Authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start Presenting, where you can use most Notebook functions with the Theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



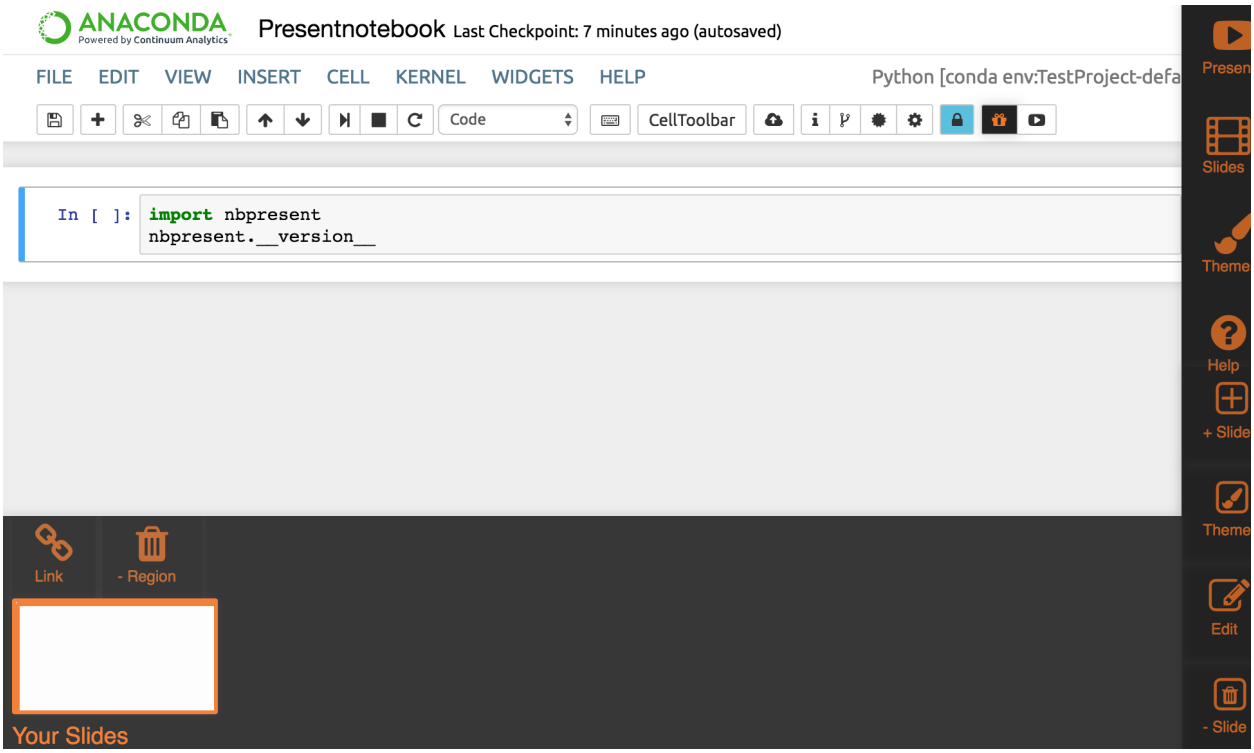
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook .ipynb file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate Help at any time to try other tours, connect with the Present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    - Cell Part: Source (blue)–Source, such as code and Markdown text.
    - Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    - Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    - Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a region and a cell part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

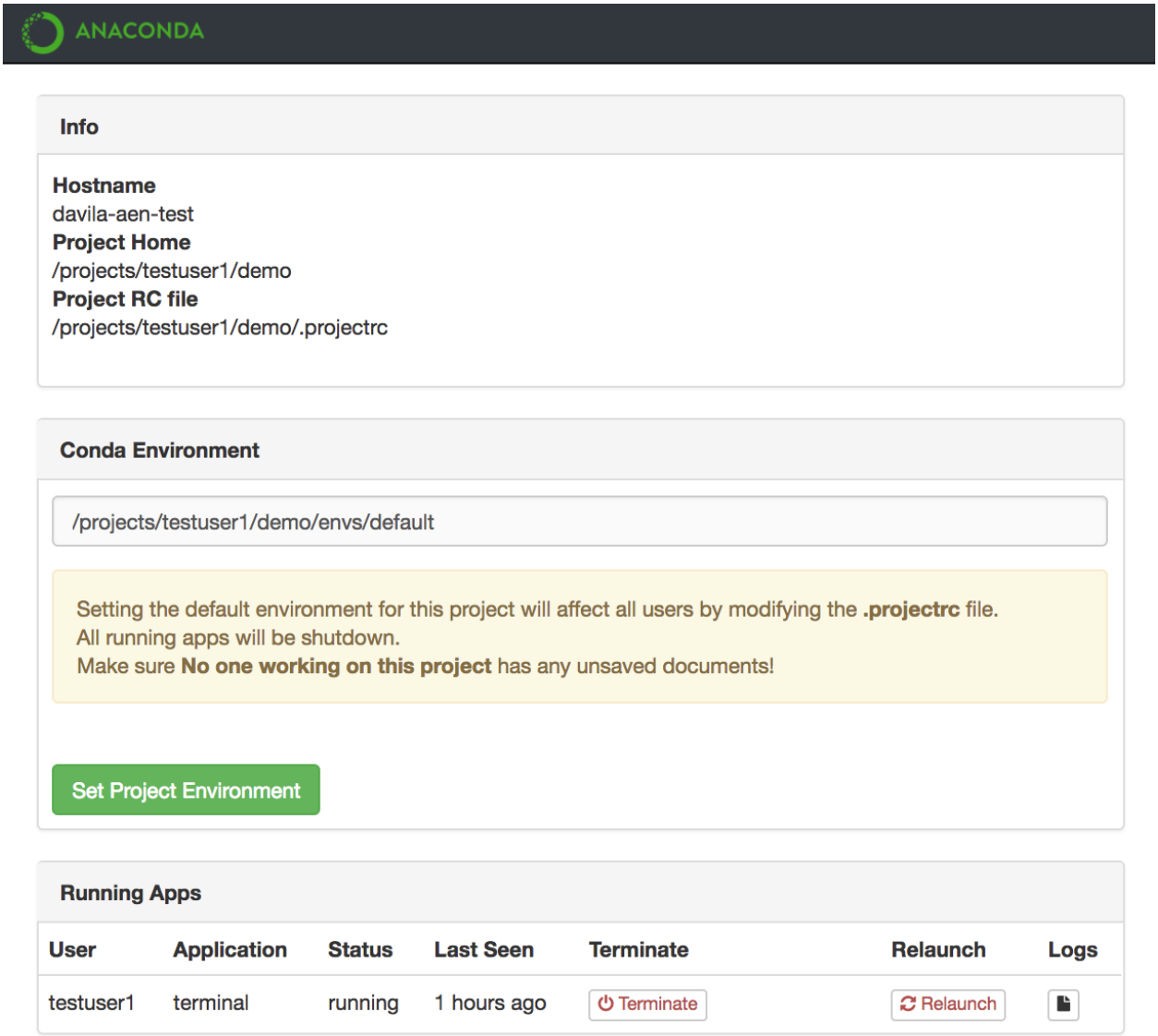
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

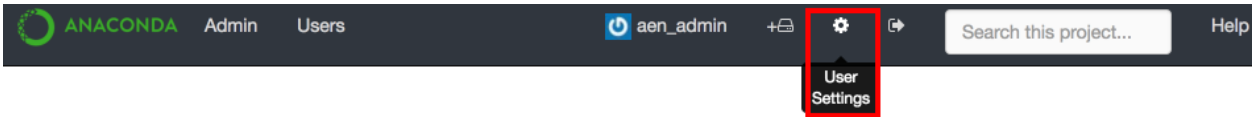
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

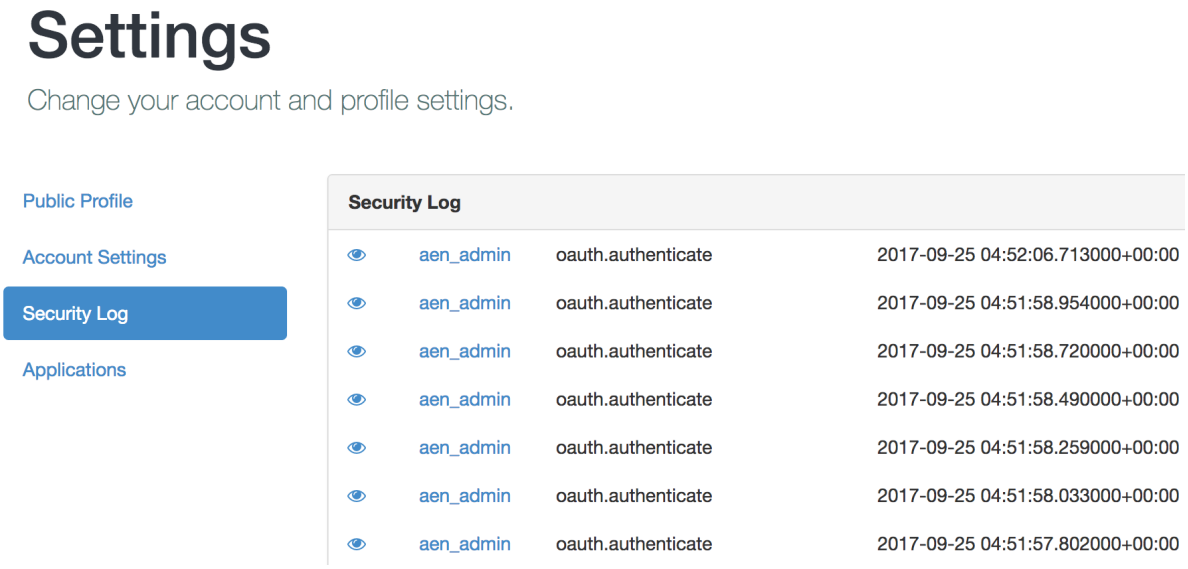
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

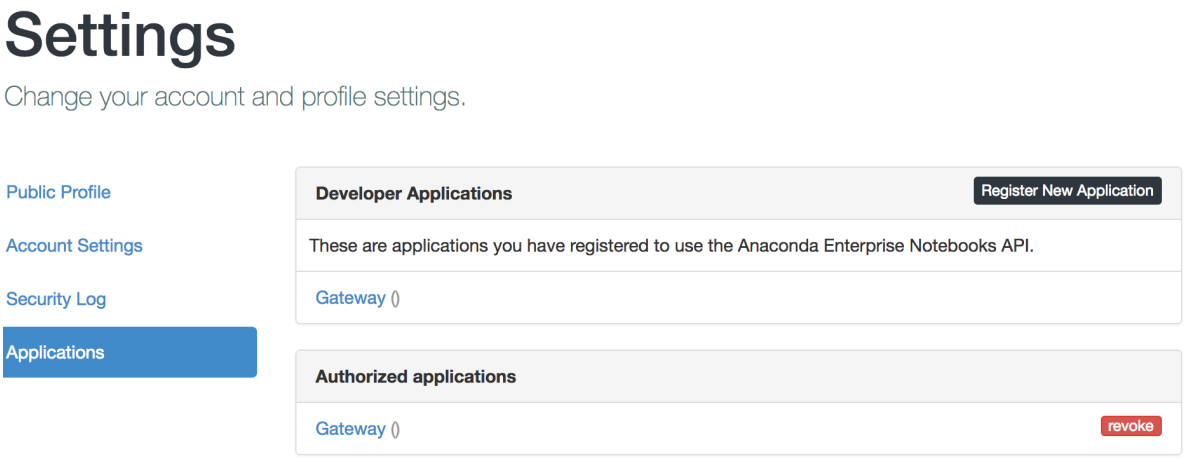


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

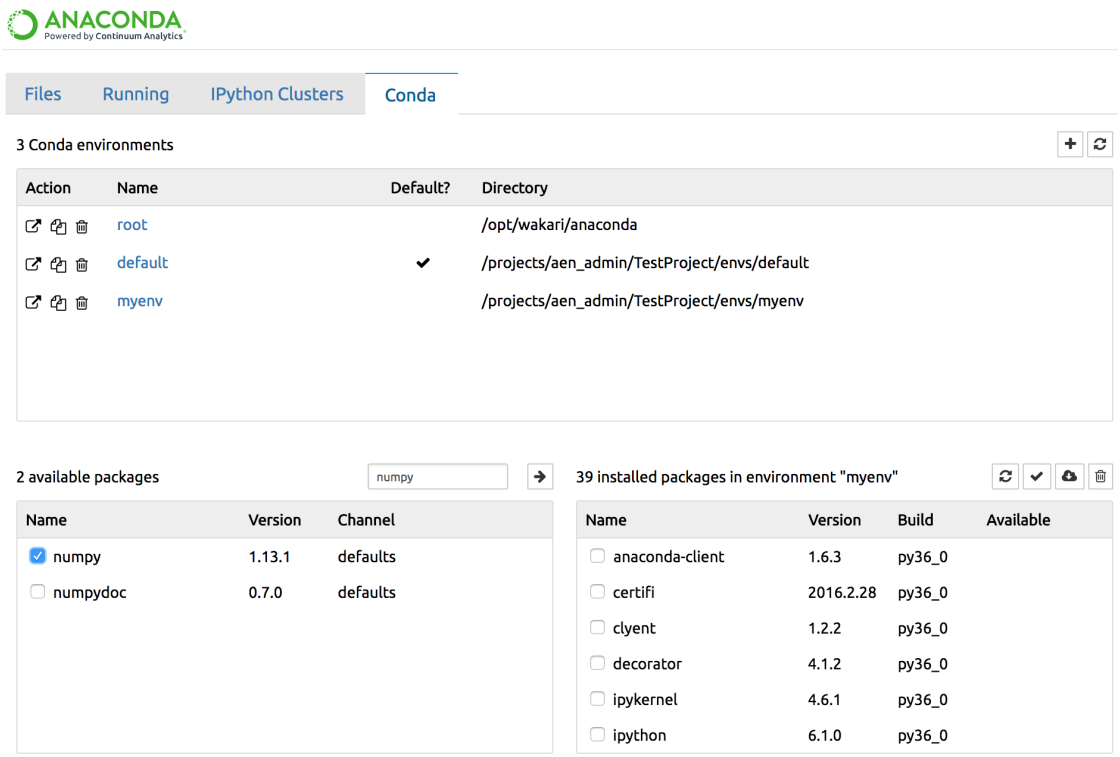
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

   ```
   conda create -n WeatherModel numpy
   ```

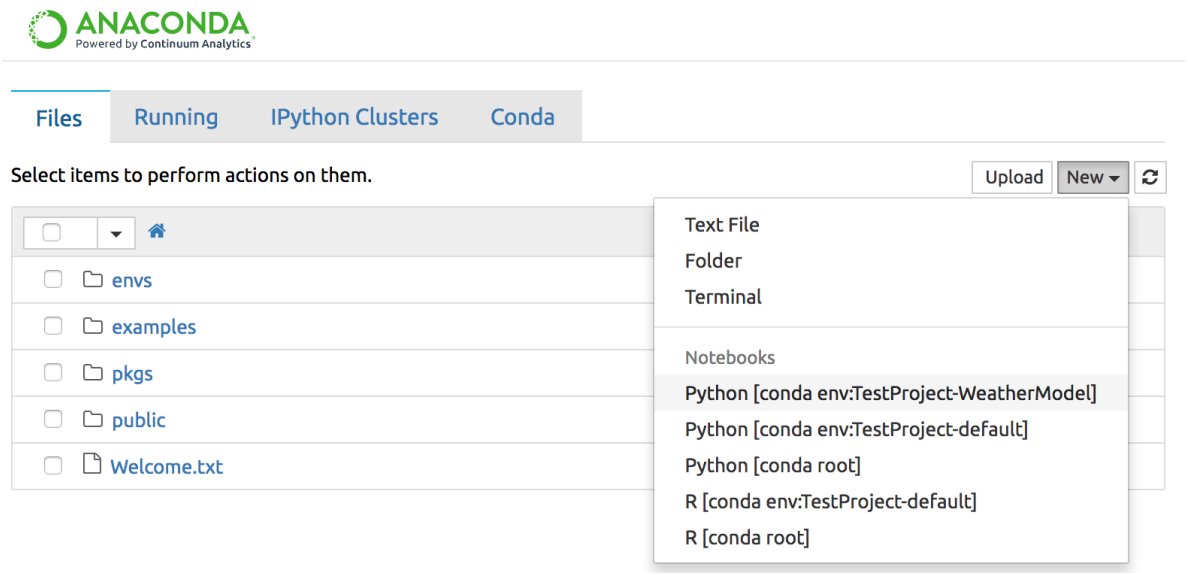
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select Python [conda env:test1-my_env].

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

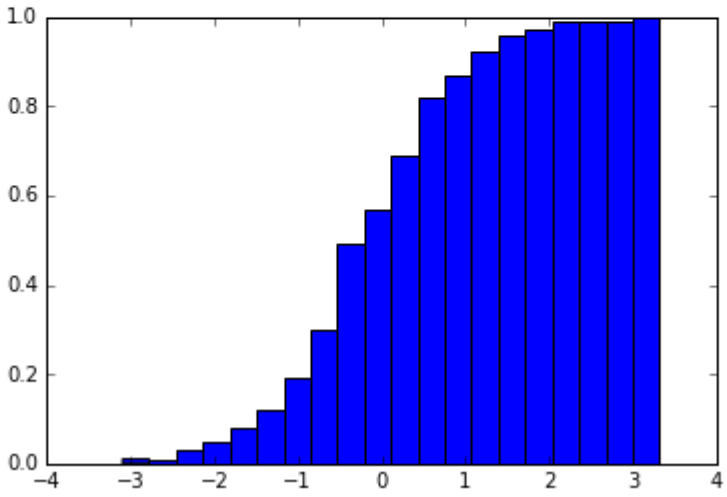
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

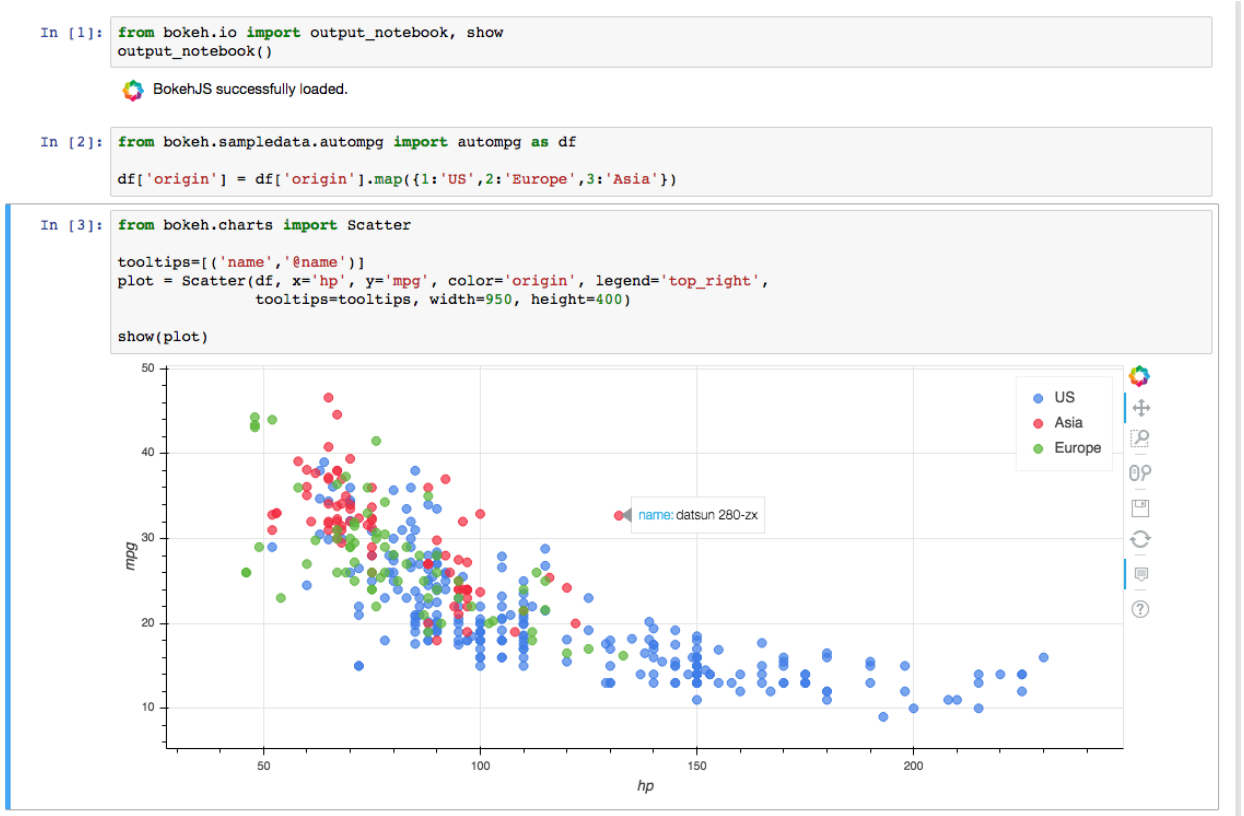
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

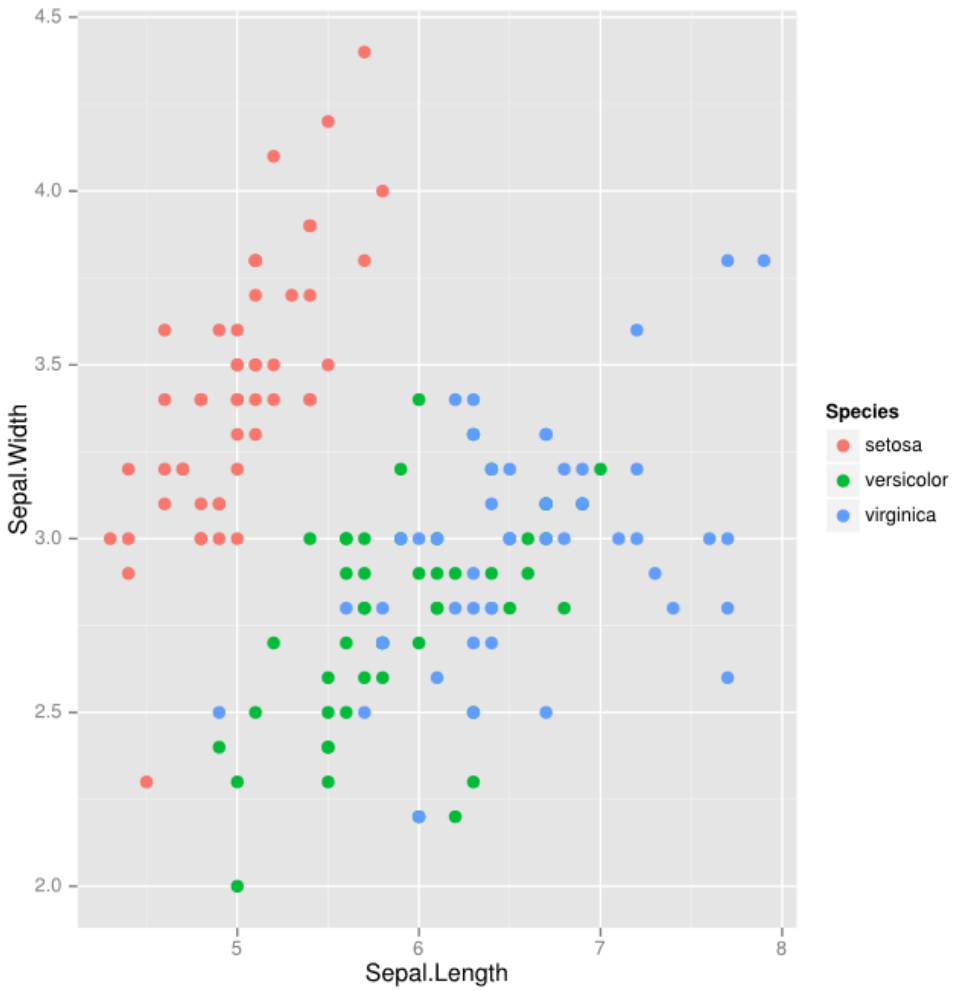
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the $PATH environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

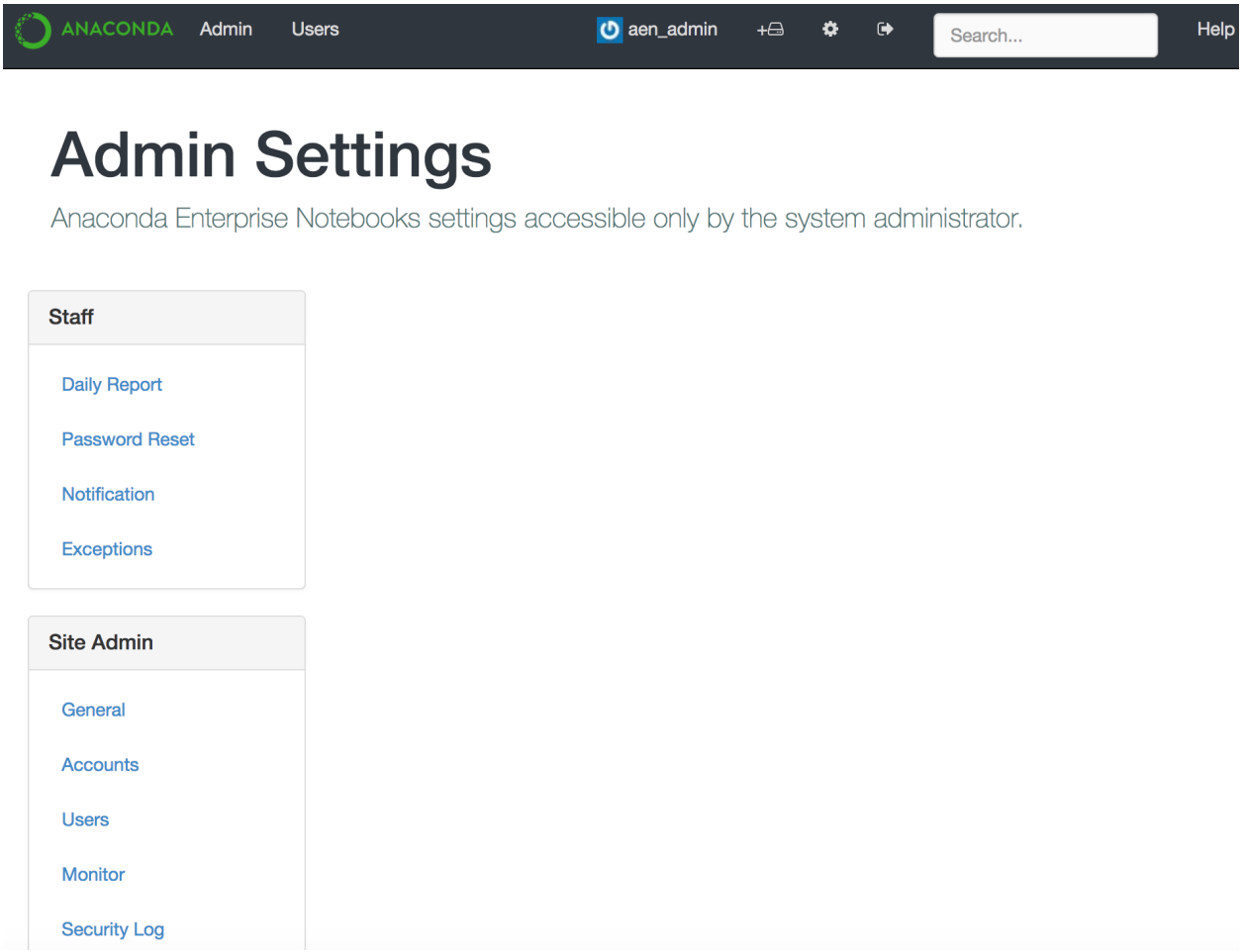
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



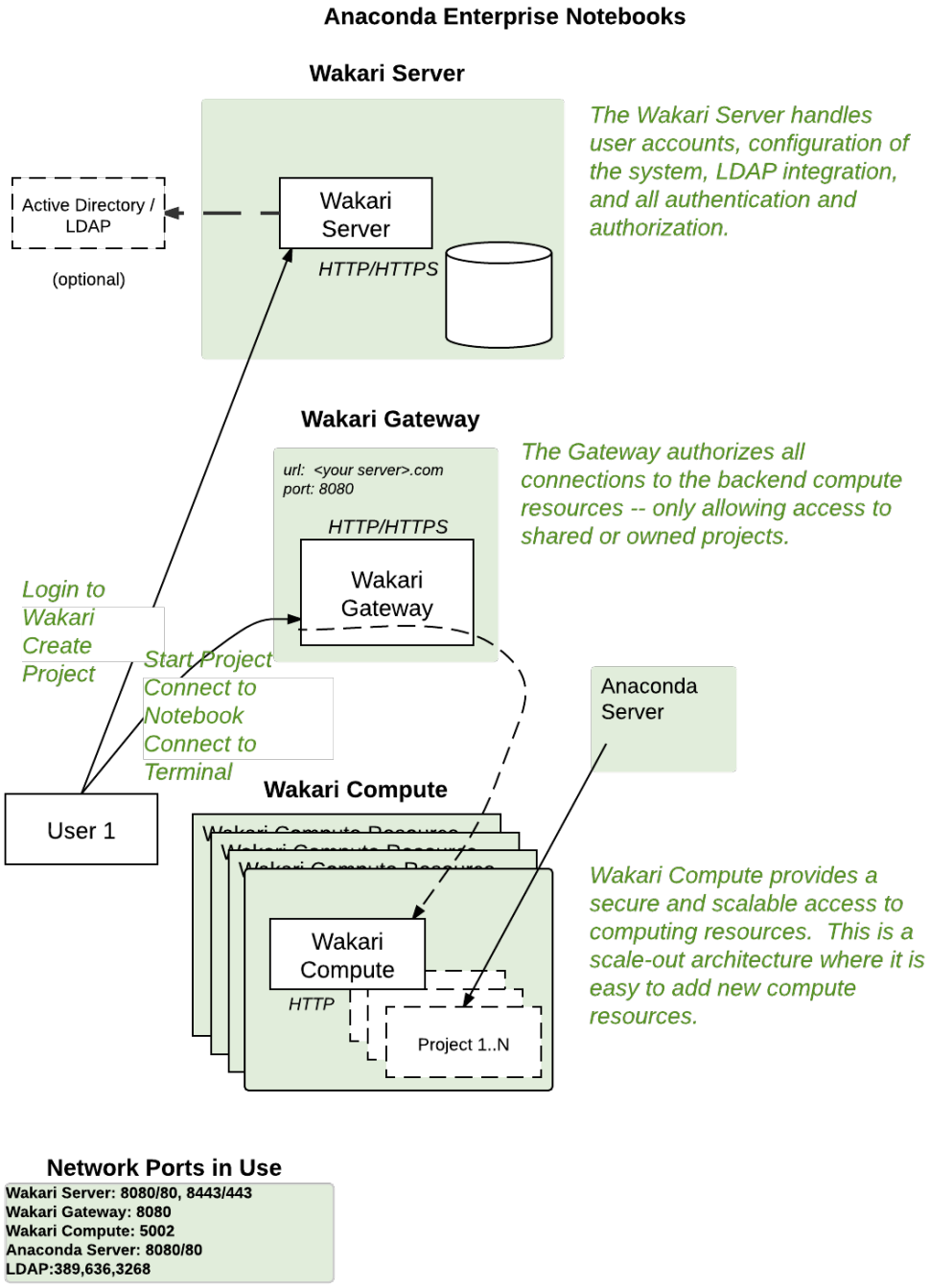
All of the other navigation bar items are the same as for a user account.

Concepts

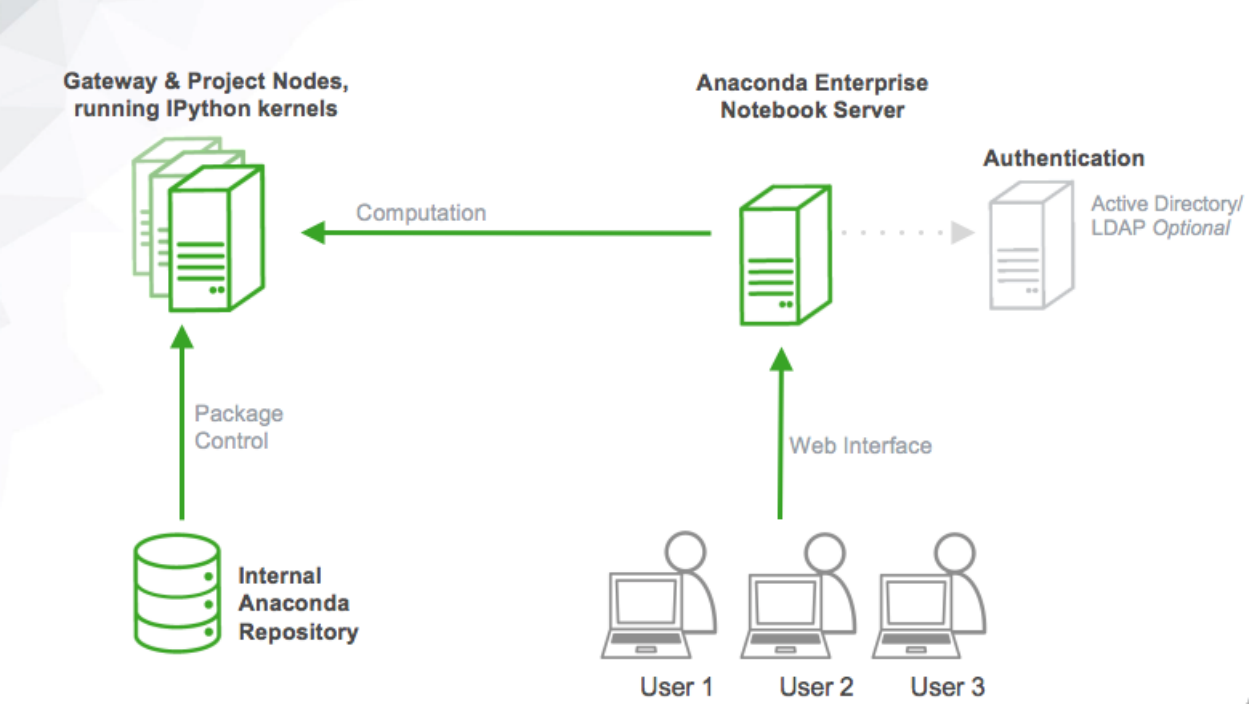
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Organizationally, each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for its internal data persistency. It is typically run on the same host as the server but can also be *installed* on a separate host.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web-process which runs on a high numbered port that only listens on localhost. NGINX is also responsible for static content.

Server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is: `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

Wk-compute loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually wakari or aen_admin.

The Supervisor daemon process is called "supervisord". It runs in the background and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name "default" into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

You can use a new conda environment to test a new version of a package before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, wakari or aen_admin.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Equal to or higher than version 2.6.8 and lower than version 3.0.
  - NGINX—Equal to or higher than version 1.6.2.
  - Elasticsearch—Equal to or higher than version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.3.3-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.3.3-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.3.3-Linux-x86_64.sh
```

NOTE: The current $RPM_CDN server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use *curl* or *wget* to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as <AEN_SERVER_IP> or <AEN_SERVER_FQDN>, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the AEN_SUDO_CMD environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an AEN_SUDO_CMD entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the *bzip2* package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.6.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.10.2-1.el7.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

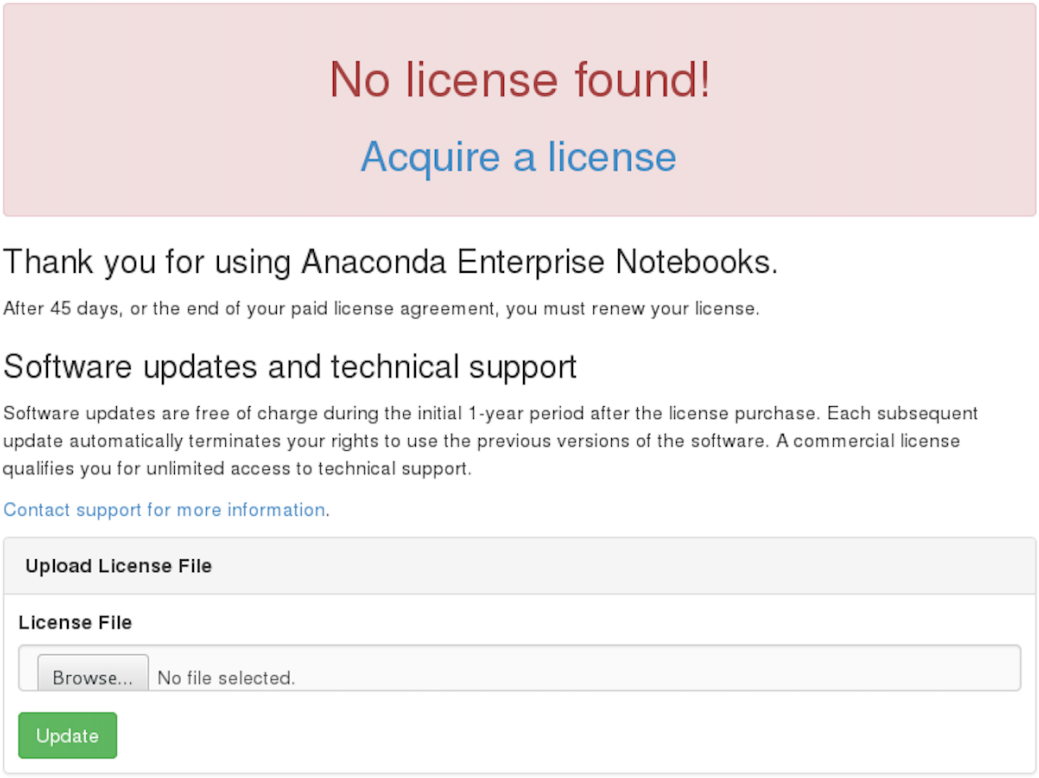
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

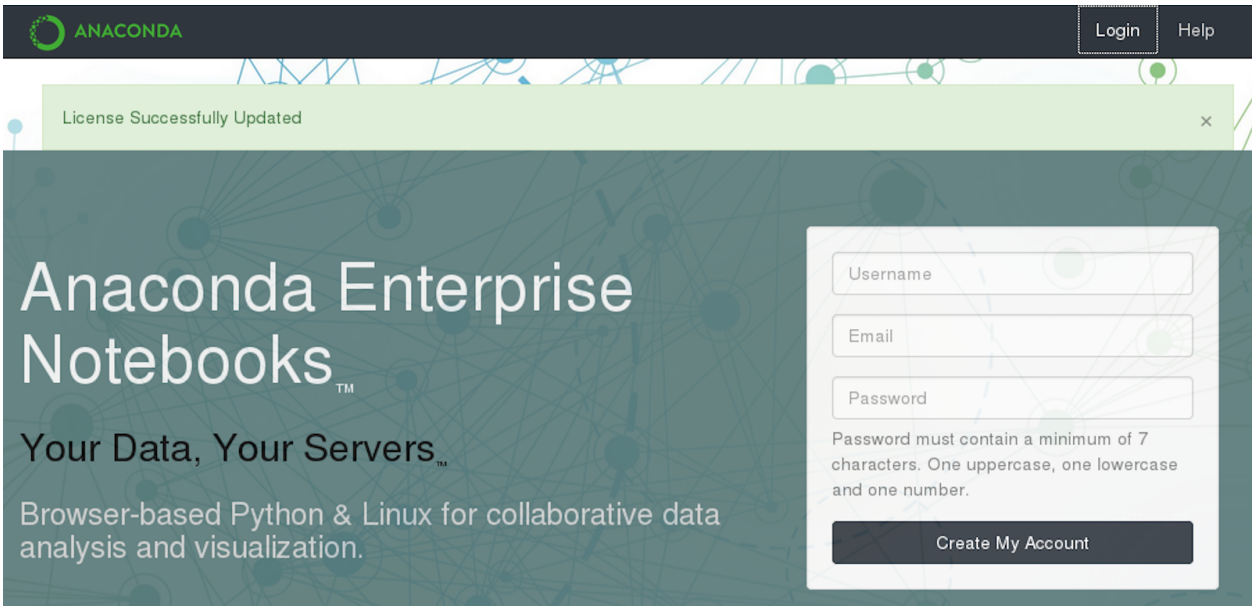
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

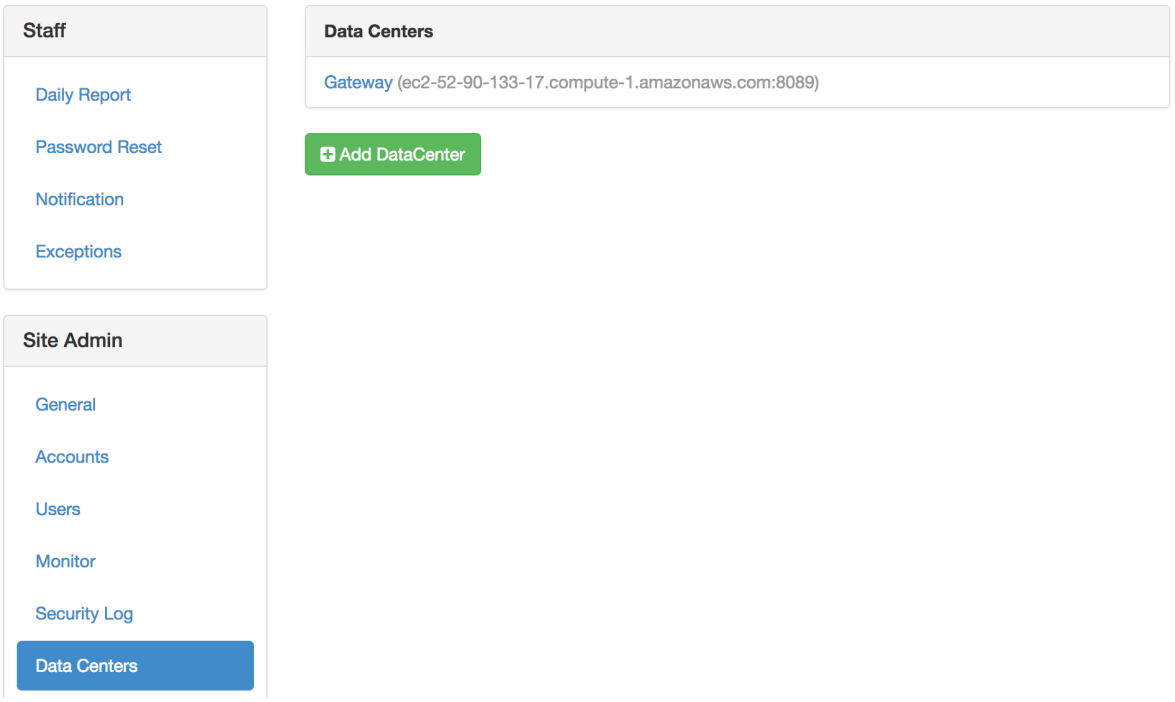
Starting the gateway

Run:

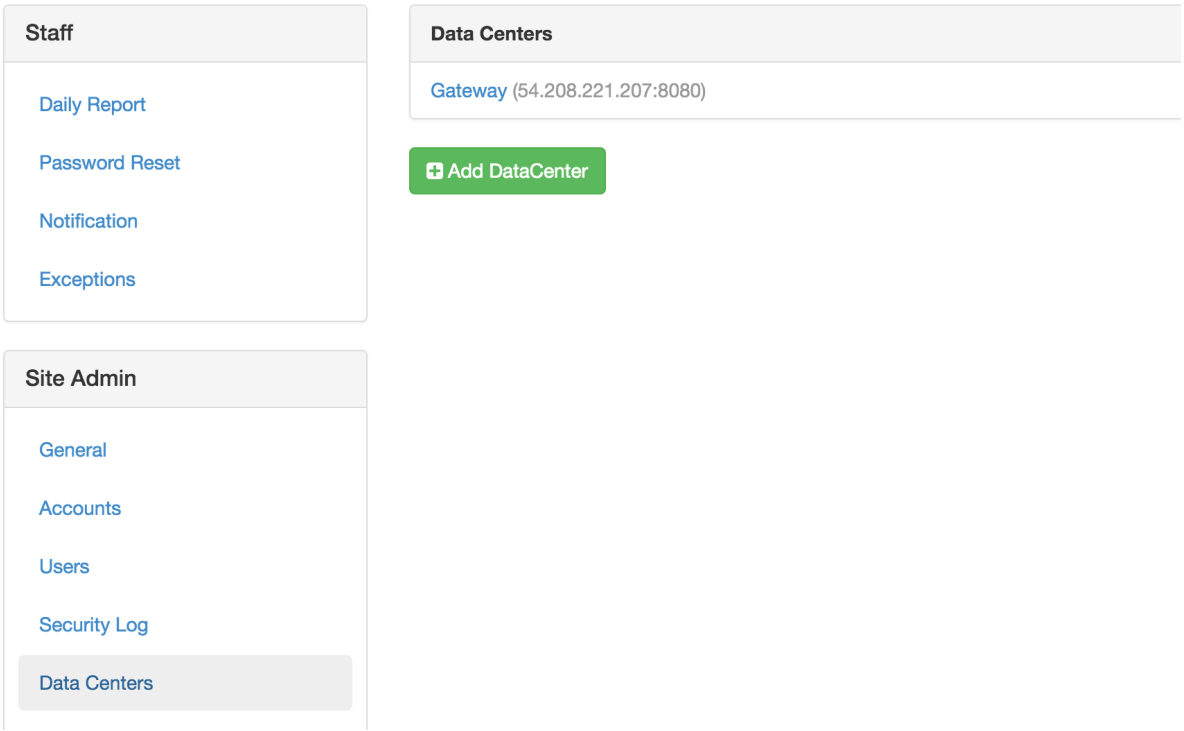
```
sudo service wakari-gateway start
```

Verifying your gateway registration

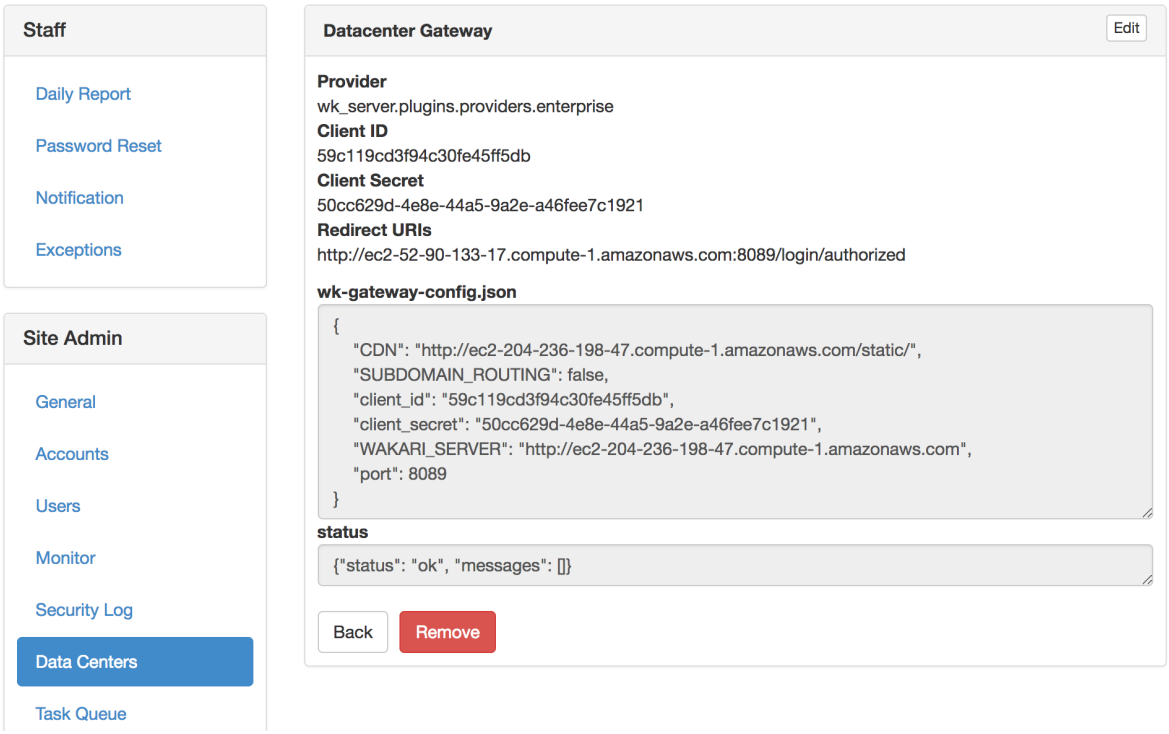
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

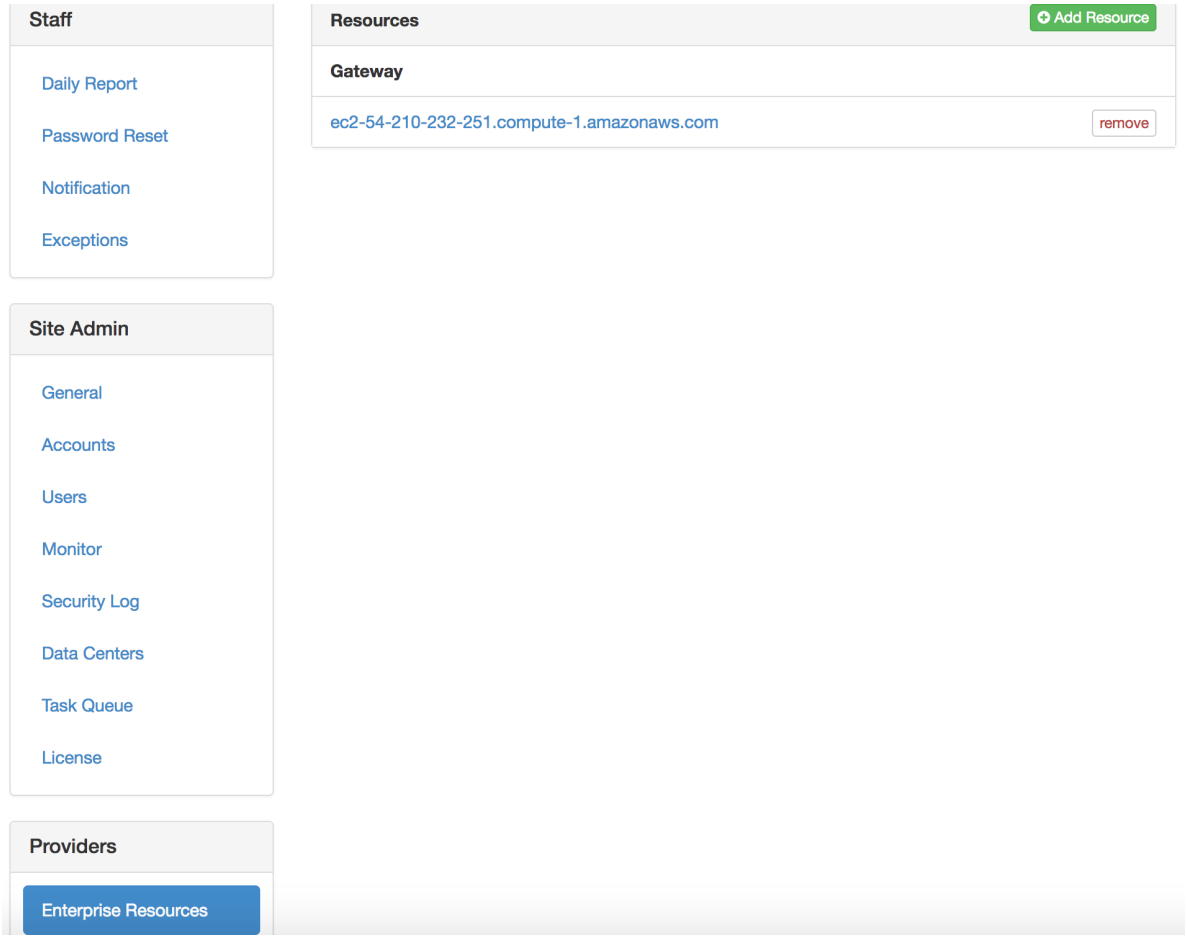
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

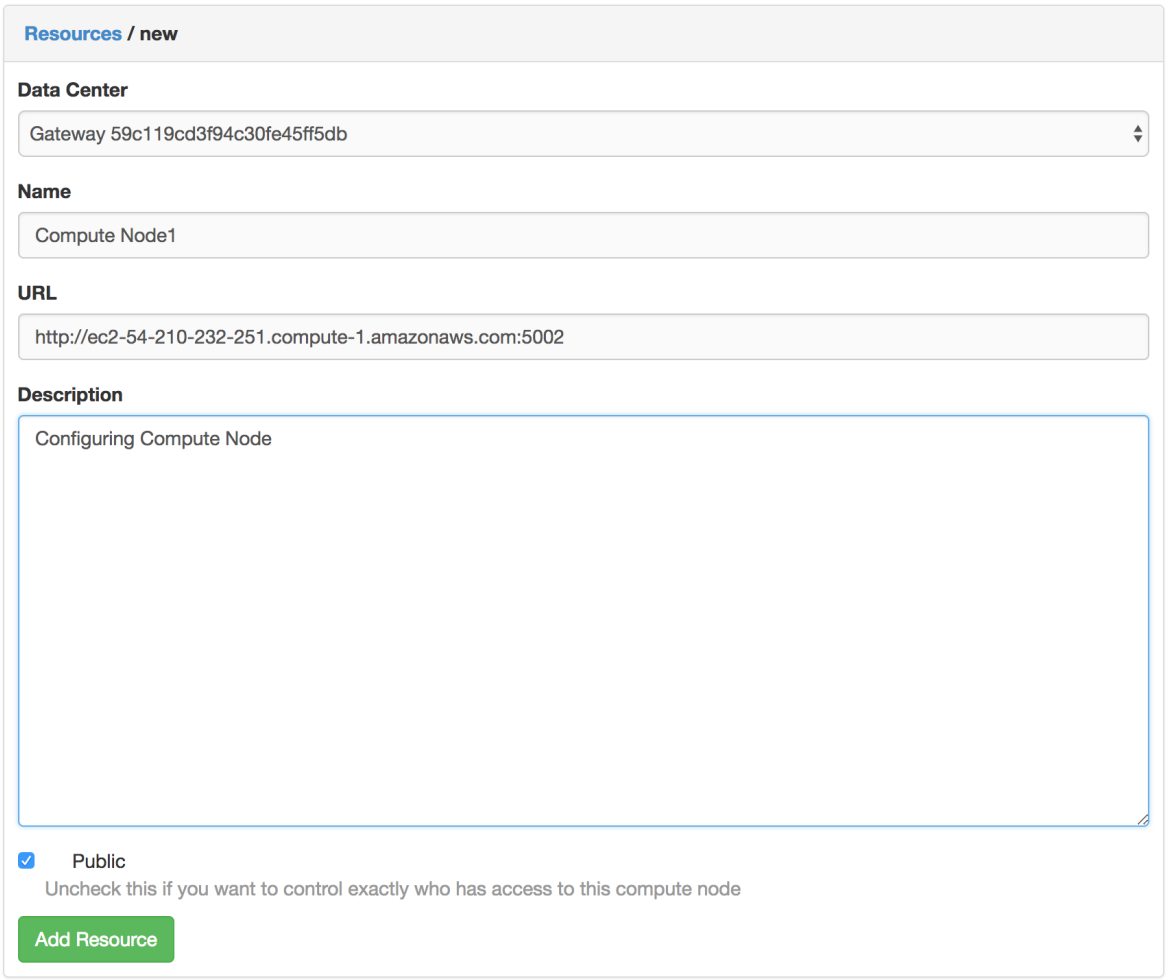
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the AEN_SRVC_ACCT user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda Repository server instead of Anaconda.org.

To configure AEN to use a local on-site Repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.anaconda.com
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with Repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

NOTE: Replace <your Anaconda Repository> with the actual name or IP address of your local Anaconda Repository installation.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 294: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/

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Key	Default	Description
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The Cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
SESSION_COOKIE_SEC	false	This key is automatically set to true when SSL is enabled. It will default to false when SSL is not enabled. Manually changing this value may cause the system to malfunction if it's not configured properly.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some Enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.

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Key	Default	Description
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set uniqueEmail to false, you must drop the existing index in the database. EXAMPLE: If the index name is email_1, run db.users.dropIndex("email_1").

Table 295: Gateway Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
port	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
client_id		The client ID assigned to this gateway by the server during wk-gateway-configure.
client_secret		The Client secret assigned to this gateway by the server during wk-gateway-configure.
httpTimeout	600	Timeout in seconds. The default is 10 minutes to allow project creation.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
https		Enable SSL encryption. For more information, see *Configuring SSL*.
- key		A https subkey–Path to gateway key.
- cert		A https subkey–Path to gateway cert.
- ca		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
- passhphrase		A https subkey–Passphrase required to decrypt SSL certs.

Table 296: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.
emptyDefaultChanne	true	A boolean setting. When true AEN sets default_channels to be an empty list on the project's .condarc preventing the search of packages from the free channel. If you set this option as false, and if you already started a project with this setting as true, you will need to modify the existing project's .condarc and remove the default_channels: [] line.

Table 297: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server. plugins . providers. enterprise"]	A list of compute provider classes.
MONGO_ACTION _LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM _EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 298: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/ static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 299: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

```
"httpTimeout": 600
```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda environment directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

```
"projectRoot" : "/nfs/storage/services/wakari/projects",
```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the identicalGID key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Authenticating with PAM

To configure AEN to authenticate with PAM, you need to have LDAP in place and pre-populated with your users. With LDAP, pam does not require to read /etc/shadow and it can authenticate successfully without root privileges.

NOTE: PAM on the linux machine needs to be tied to LDAP (pam_ldap). You cannot use PAM with local unix accounts because /etc/shadow is only readable by the root user, but pam_ldap can authenticated against LDAP (non-root).

Steps

1. Stop the wakari server:

```
sudo service wakari-server stop
```

1. update the configuration file `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` with the PAM authentication method. Change the entry for the line `"accounts":` with:

```
"accounts": "wk_server.plugins.accounts.pam",
```

1. Restart the wakari server:

```
sudo service wakari-server start
```

1. In your browser navigate to Anaconda Enterprise Notebooks and attempt to login as a PAM-based user – create and start a project, then open a Jupyter Notebook.
2. Logout then login as an administrator and go to the *Admin* view. Attempt to list users.

Testing

You can test PAM directly from the Python CLI

```
su - $AEN_USER/opt/wakari/wakari-server/bin/python
```

```
p = pam.pam()
p.authenticate("<username>", "<password>")
True
```

Troubleshooting

If the server throws an `import error` for the pam module, please make sure that the `python-pam==1.8.2` module is installed. If the `.condarc` file includes the `wakari` channel then `python-pam==1.8.2` will be installed automatically.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: ALL
```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

```
"MANAGE_ACCOUNTS": false,
```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

   ```
   "AEN_SUDO_CMD": "/path/to/alternative/sudo",
   ```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
   ```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

   ```
   "AEN_SUDO_SH": "/path/to/gatekeeper"
   ```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.

3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.

4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.

5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.

8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

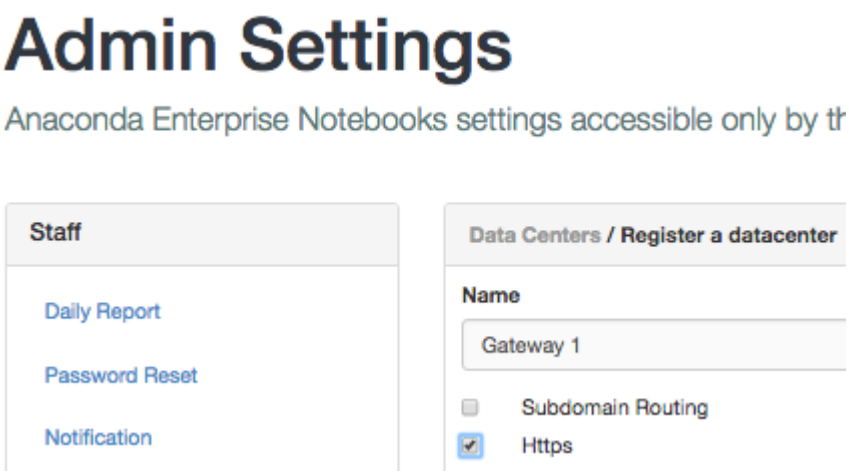
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

   NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt"
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

   NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

   EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

```
{
EXISTING_CONFIGURATION,
"SECRET_KEY": "<repo signing secret>",
"REPO_LOGIN_URL":
   "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
}
```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

```
{
EXISTING_CONFIGURATION,
"accounts": "wk_server.plugins.accounts.repo",
}
```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The jupyter-contrib-nbextensions extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in */opt/wakari/wakari-compute/share/jupyter/kernels/*.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel without the user .ipython space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The pyspark.sh script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: *.local/share/jupyter/kernels/pyspark/*. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following kernel.json file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace "<username>" with the correct user name and "<project_name>" with the correct project name.

You may choose any name for the 'display_name'.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"
```

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```
# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Enabling server-side session management

By default, AEN uses client-side session management which is vulnerable to session replay attacks if an attacker manages to steal a valid session ID of a user.

To enable server-side session management:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "USE_SERVER_BASED_SESSIONS": true,
   ```

2. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

Terminate terminal sessions on logout

By default, when a user logs out, their open terminal sessions will remain active.

To disable this behavior:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

2. Modify the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

3. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

4. Restart the AEN gateway service:

   ```
   sudo service wakari-gateway restart
   ```

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.3.3 from 4.3.2 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.3.2 upgrade instructions*
- *AEN 4.3.1 upgrade instructions*
- *AEN 4.3.0 upgrade instructions*
- *AEN 4.2.2 upgrade instructions*
- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

4. Update `.condarc` files:

`/opt/wakari/miniconda/.condarc` should be updated with the following content:

```
channels:
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults

create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
```

and `/opt/wakari/anaconda/.condarc` should be updated with the following content:

```
channels:
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults
create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
auto_update_conda: false
```

NOTE: Both contents are similar but different ones, be sure to update them as indicated.

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

   NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                             \
                 wakari-enterprise-server-conf-update=2.0.13
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

   Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

   AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

   Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.
9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.13
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

```
ps aux | grep wakari-indexer
```

   NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

   Terminate any remaining `wakari-indexer` processes:

```
sudo killall wakari-indexer
```

   NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

```
ps aux | grep wk-app-gateone
ps aux | grep wk-app-workbench
ps aux | grep wk-app-viewer
ps aux | grep wk-app-terminal
ps aux | grep jupyter-notebook
```

   NOTE: If you stopped all the projects, you will not see any AEN app processes running.

   Terminate any remaining AEN application processes by running one or more of the following:

```
sudo killall wk-app-gateone
sudo killall wk-app-workbench
sudo killall wk-app-viewer
sudo killall wk-app-terminal
sudo killall jupyter-notebook
```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

```
channels:
  - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
  - r
  - https://conda.anaconda.org/wakari
  - http://repo.continuum.io/pkgs/main/
  - defaults
create_default_packages:
  - anaconda-client
  - ipykernel=4.10.0
auto_update_conda: false
```

   NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade *Anaconda* in the root environment:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda geotiff --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda iopro --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda libthrift --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda remove -p /opt/wakari/
↪anaconda basemap --yes

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
             -p /opt/wakari/anaconda              \
             --file aen-anaconda-update-4_3_3
popd
```

5. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                -p /opt/wakari/wakari-compute        \
                --file aen-compute-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                --no-deps                            \
                -p /opt/wakari/wakari-compute        \
                wakari-enterprise-compute-conf-update=2.0.17
popd
```

NOTE: When upgrading the wakari-compute environment, you may see *ImportError* warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

6. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

7. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

8. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

9. Install necessary dependencies:

   NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

   NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

10. Start the compute service:

```
sudo service wakari-compute start
```

11. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

12. Restart the AEN Server with:

```
sudo service wakari-server restart
```

13. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.3

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4.3.3
popd
```

   To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.3
```

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```
sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4.3.3
popd
```

NOTE: Replace <USER> with the user's name. Replace <PROJECT> with the project name.

NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

NOTE: These commands update packages listed in `aen-anaconda-update-4.3.3` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

```
service wakari-server stop
```

2. Stop MongoDB:

```
service mongod stop
```

3. Remove AEN server software, AEN database files and NGINX configuration:

```
rm -Rf /opt/wakari/wakari-server
rm -Rf /opt/wakari/miniconda
rm -Rf /var/lib/mongo/wakari*
rm -Rf /etc/nginx/conf.d/www.enterprise.conf
```

NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

```
service mongod restart
service nginx restart
```

5. Check for any outstanding server processes and stop them:

```
ps -ef | grep -e wakari-server -e wk-server
```

6. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

7. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

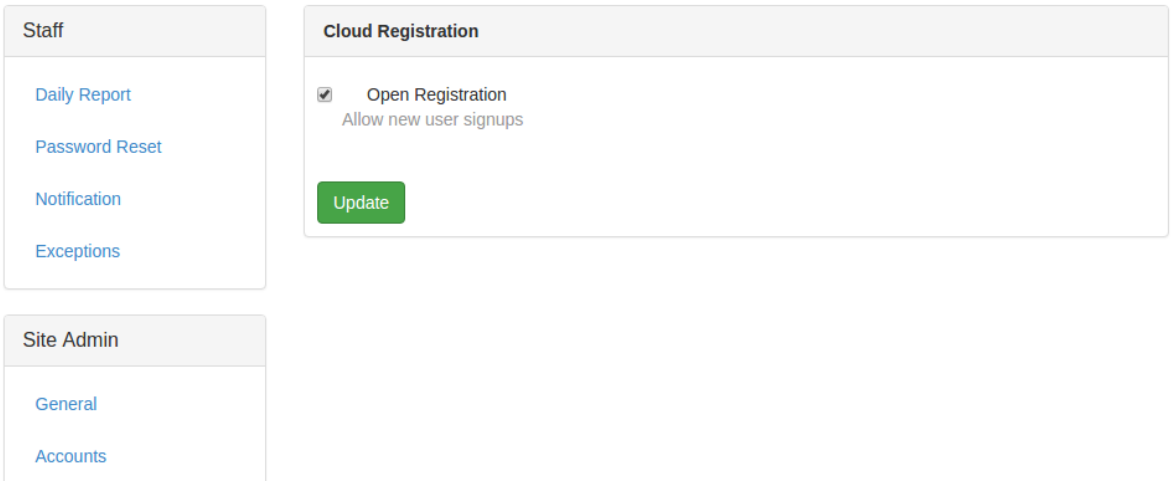
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

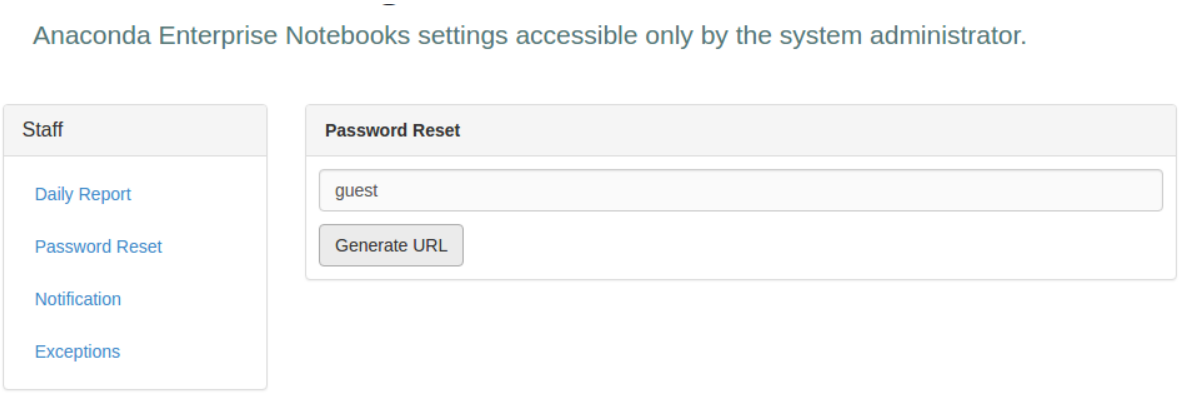
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.
2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

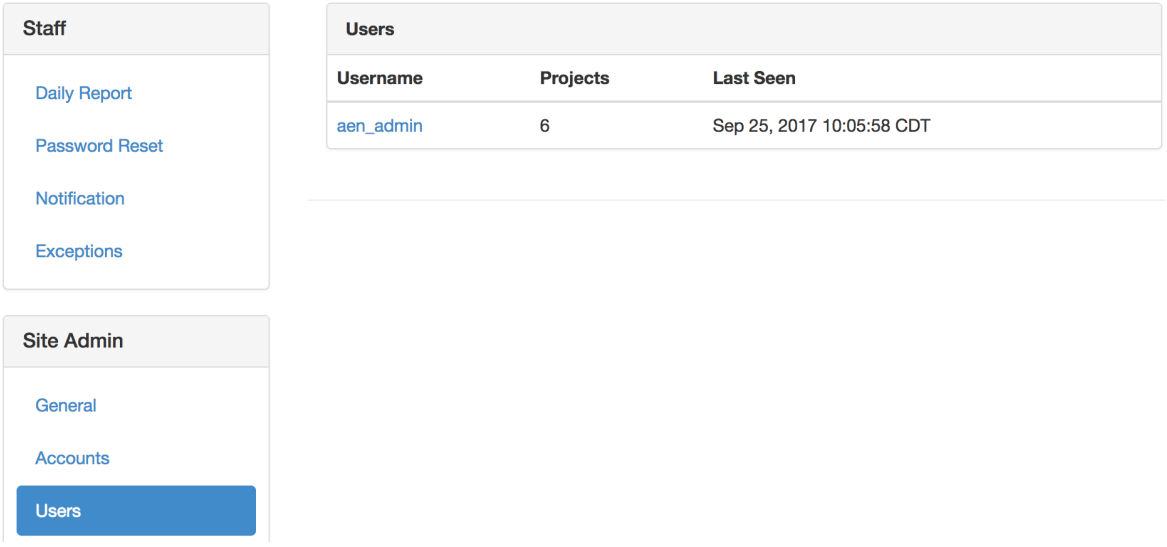
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

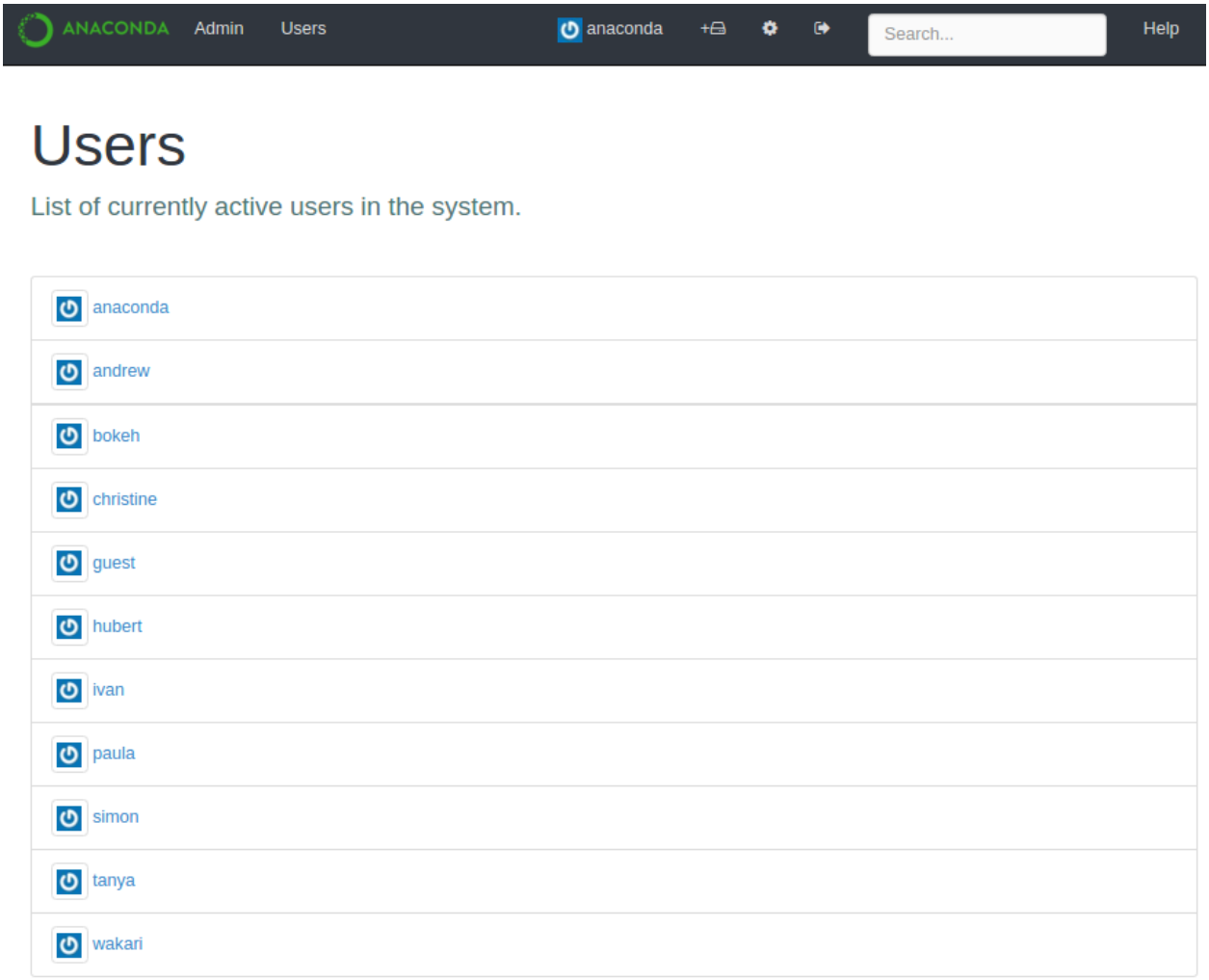
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

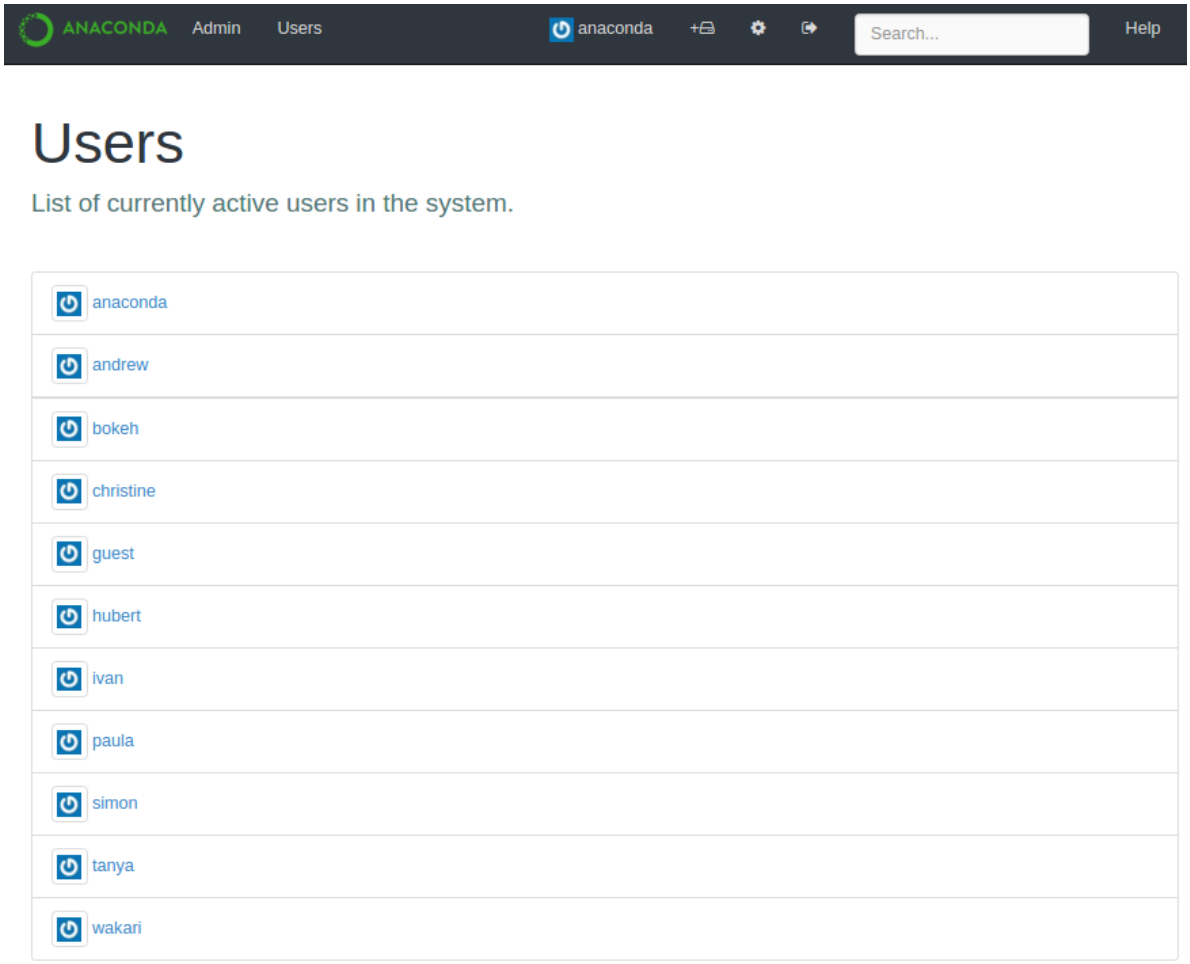


Click a username to open the user's profile page.

Viewing a user profile

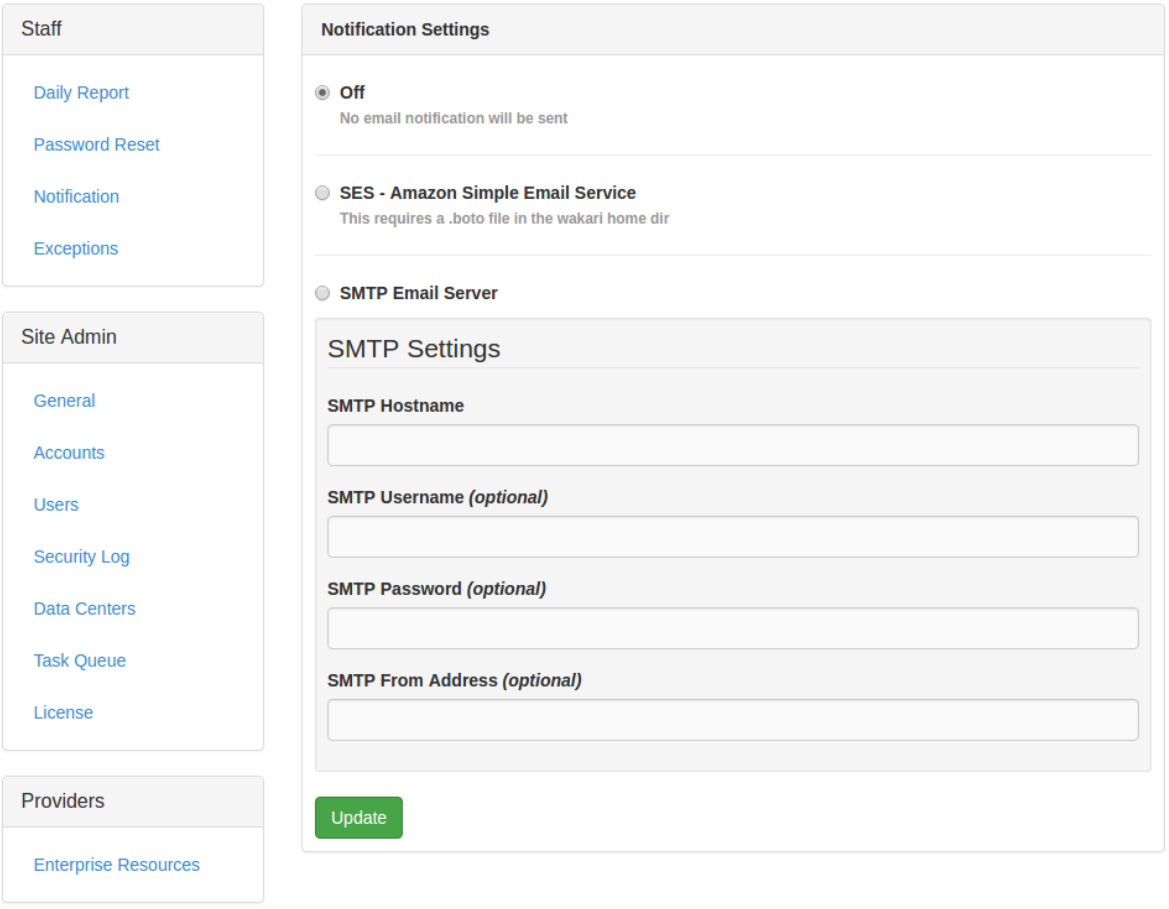
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

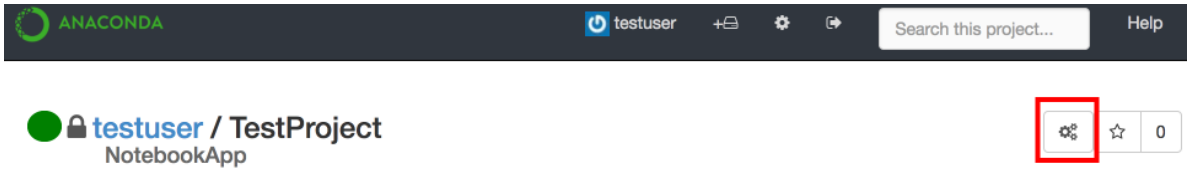
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

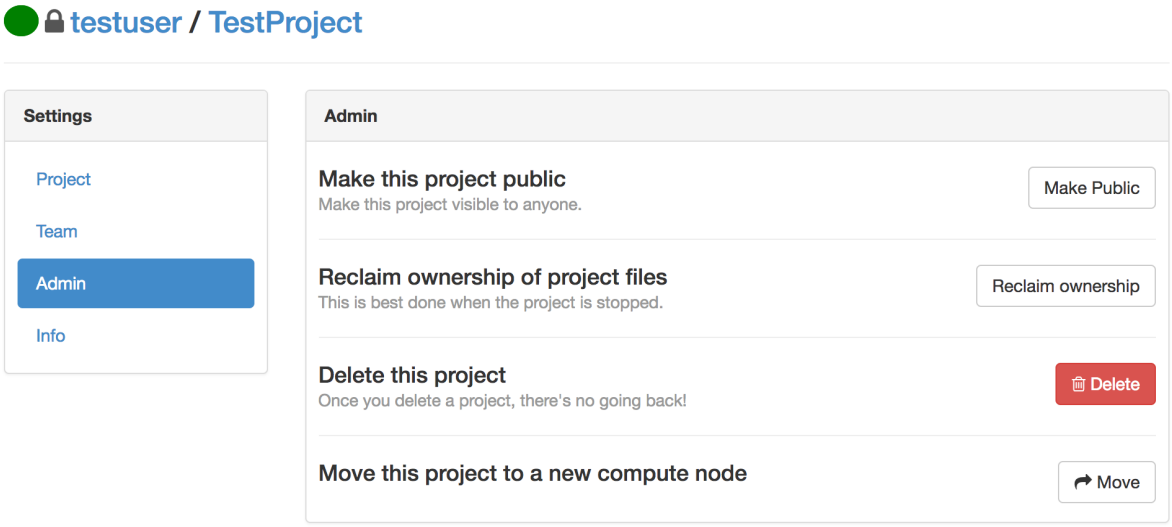
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

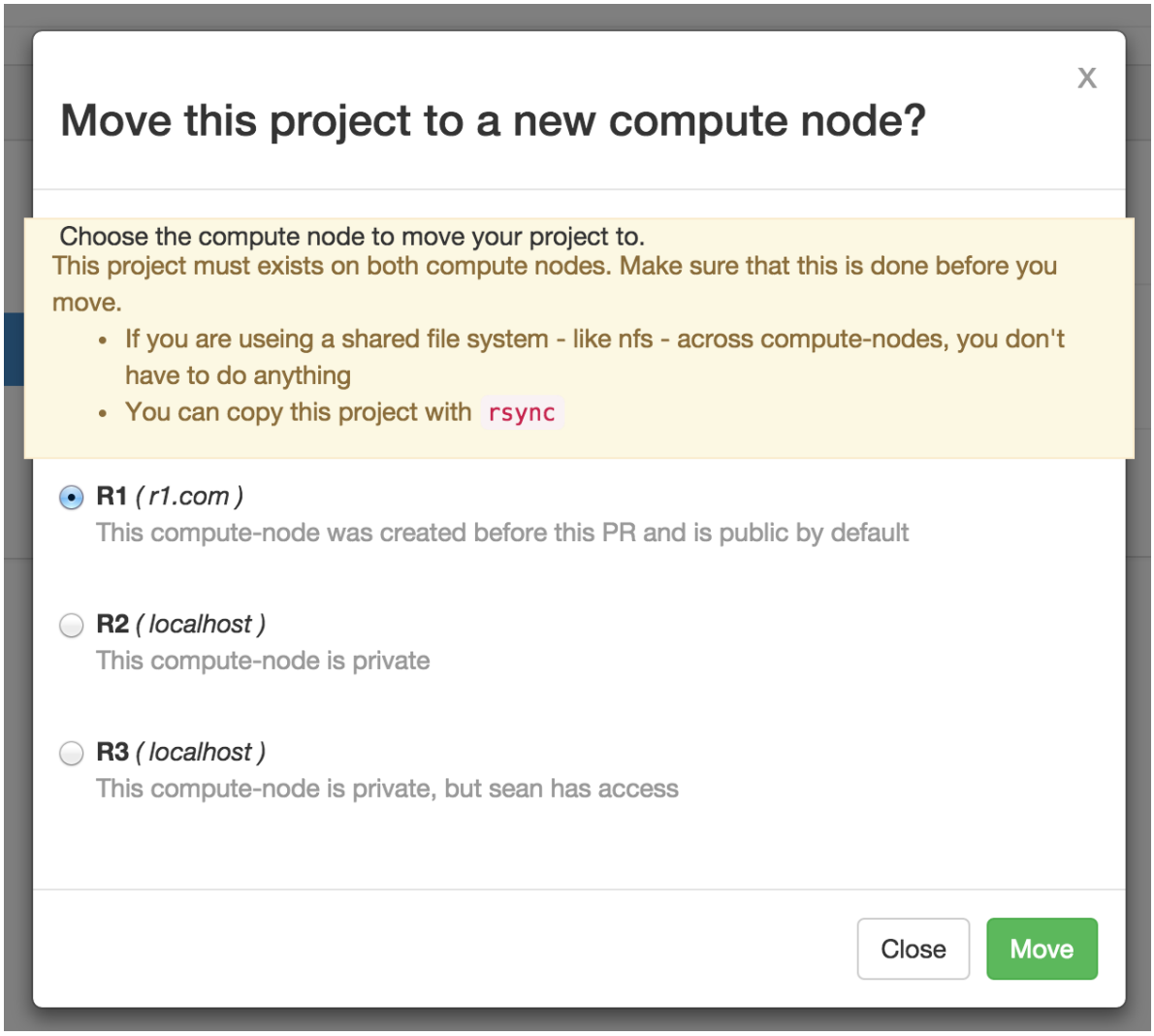
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

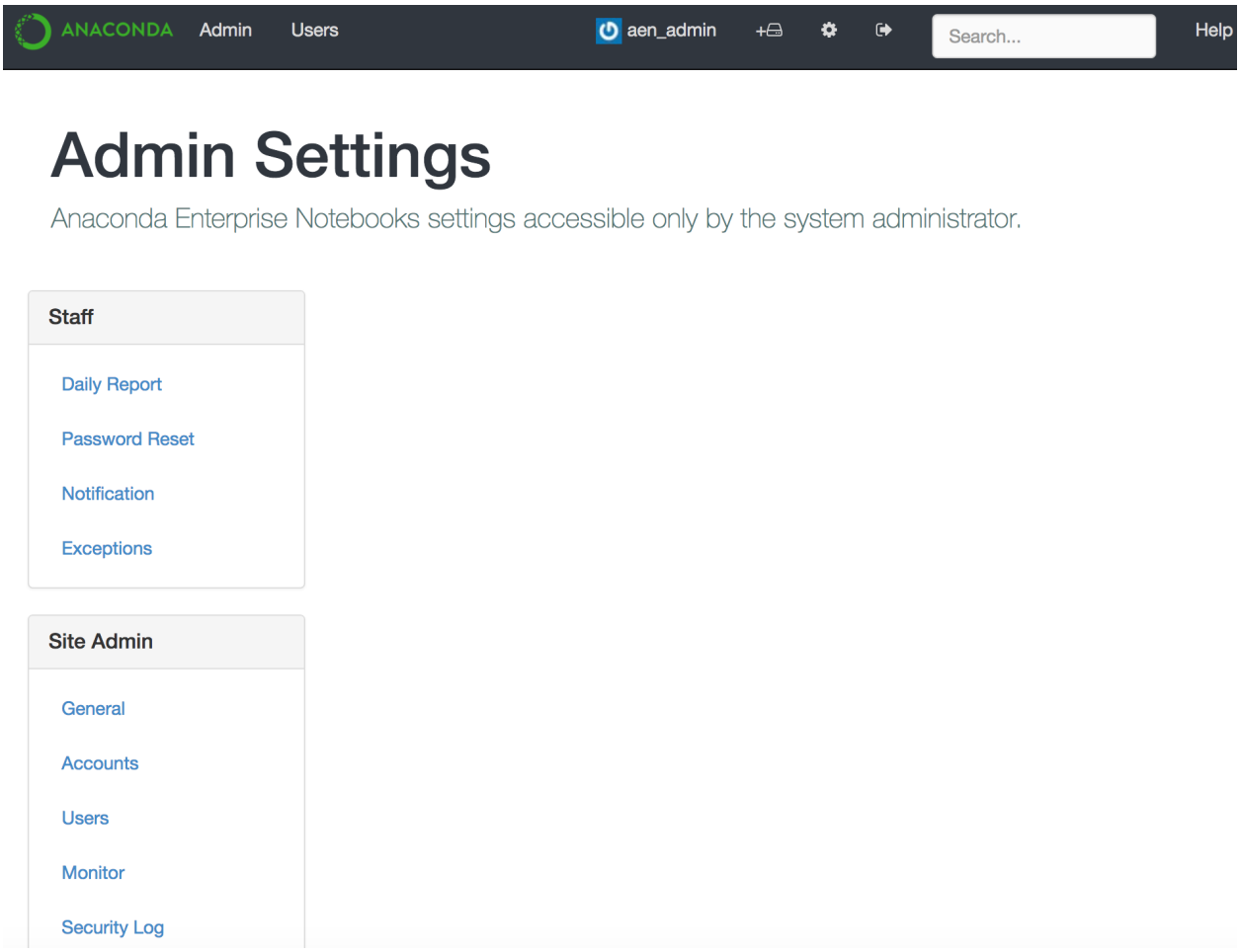
NOTE: Replace `<username>` with the actual username and `<projectname>` with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in `/opt/wakari/wakari-gateway/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.3-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

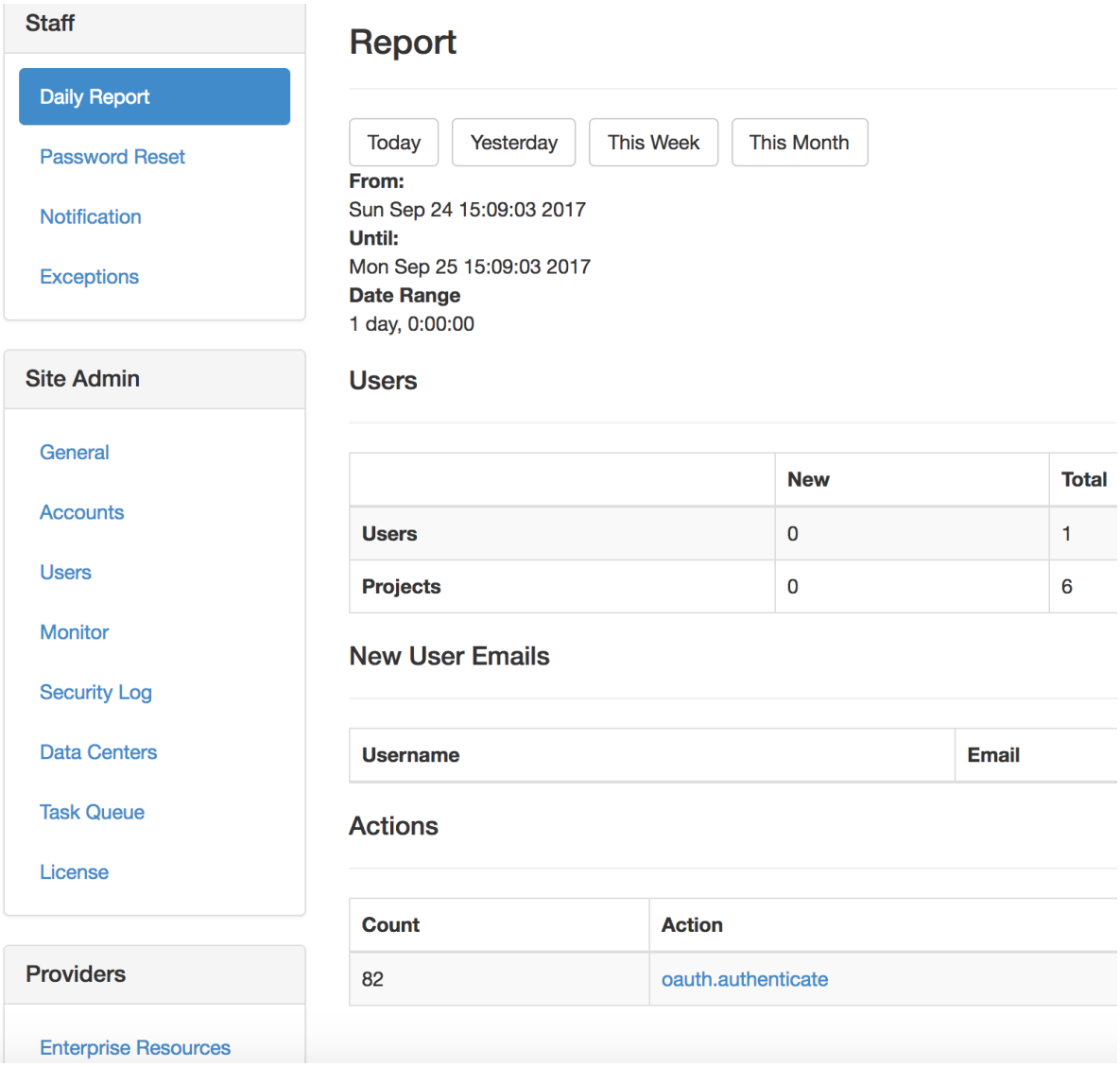
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



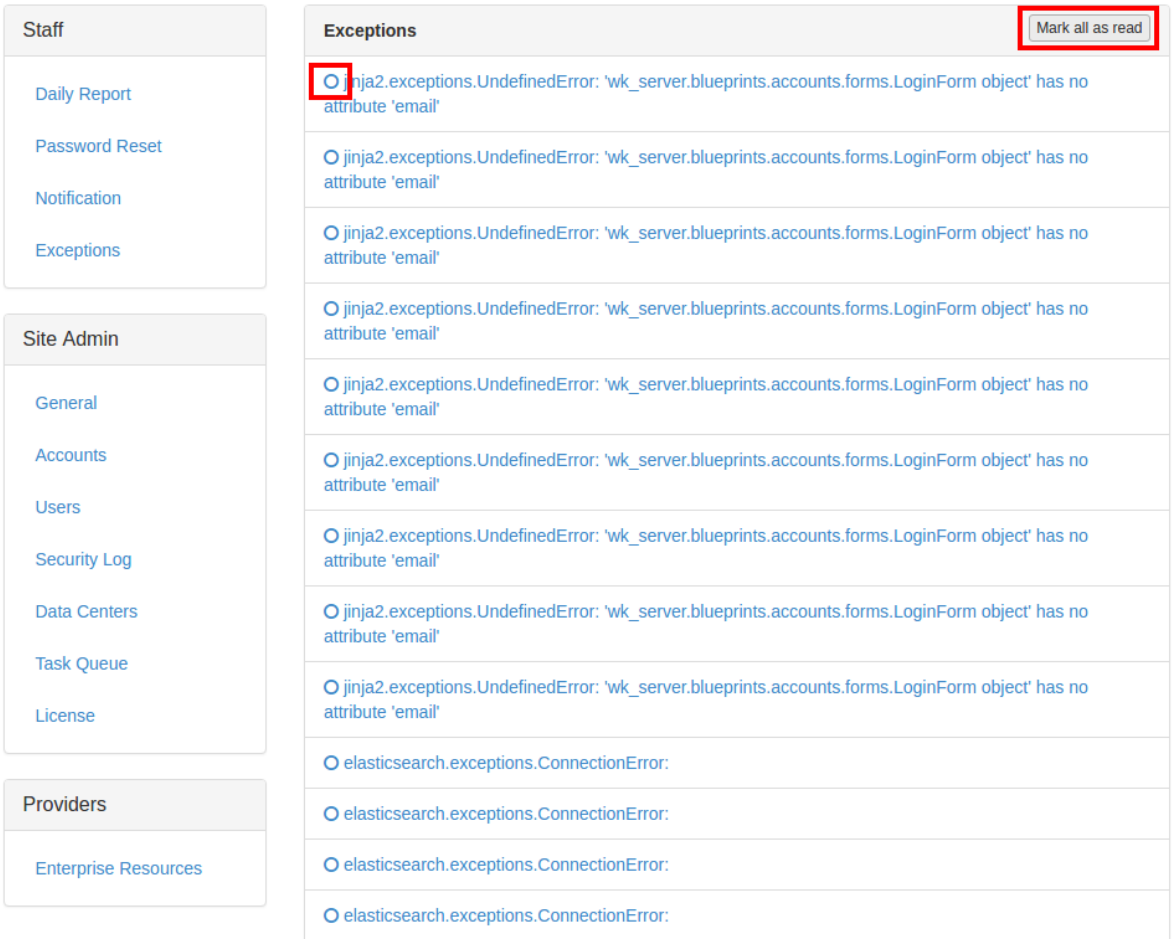
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

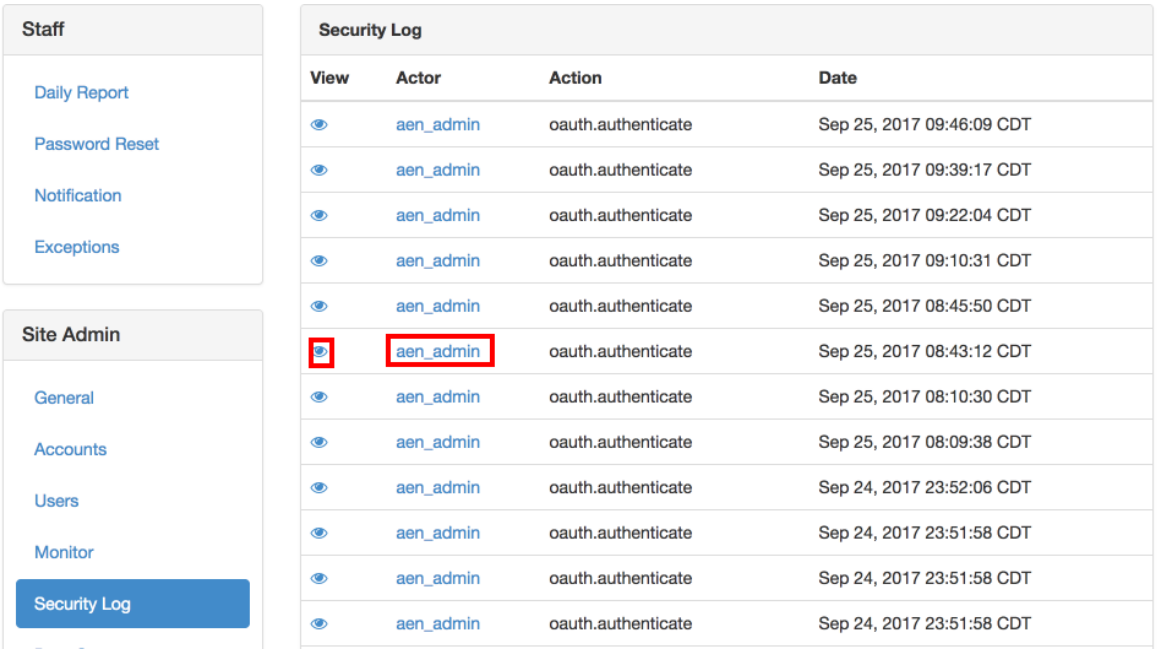
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

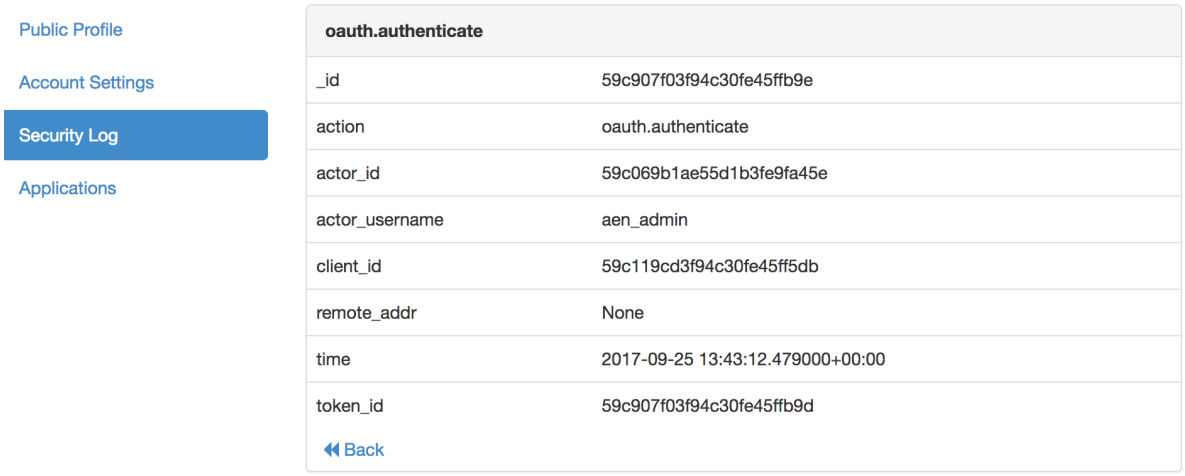
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

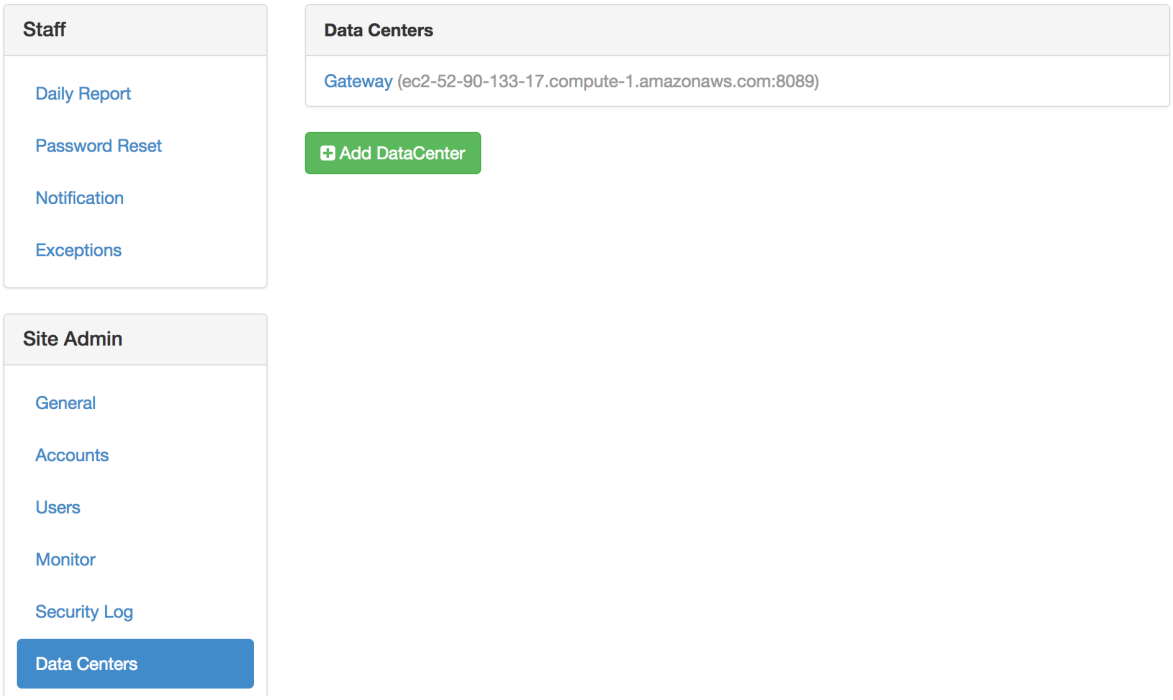
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

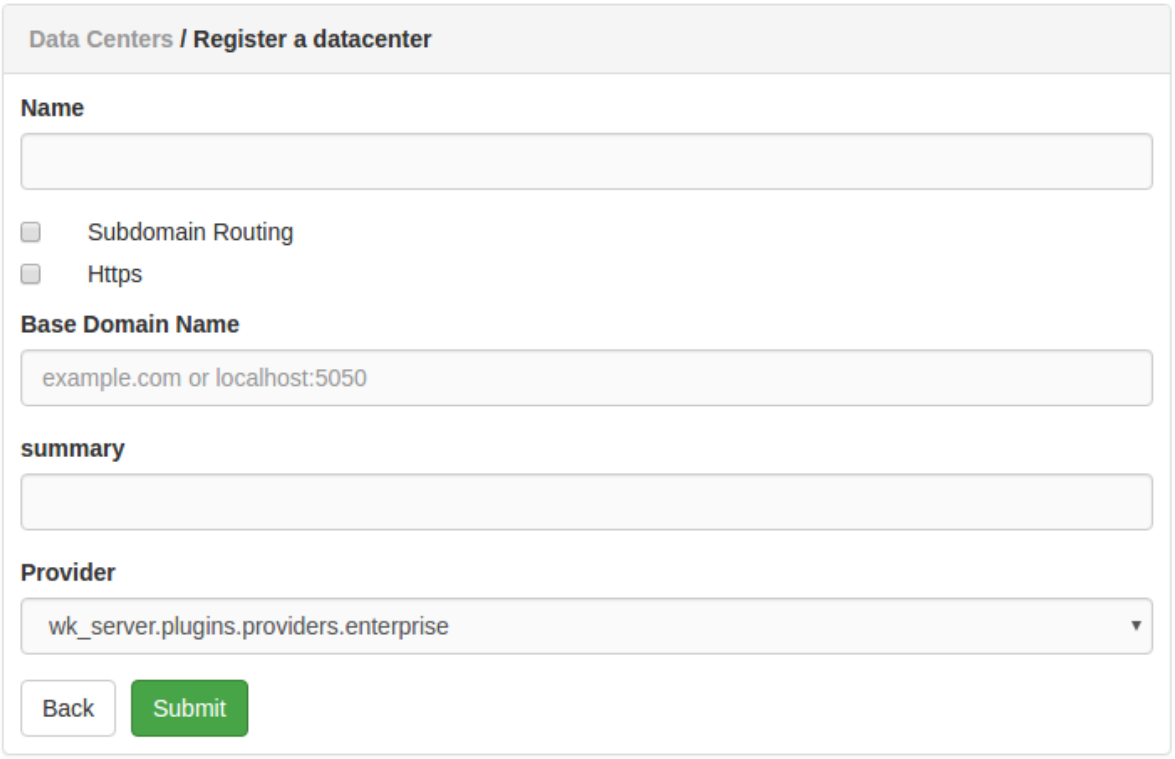
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

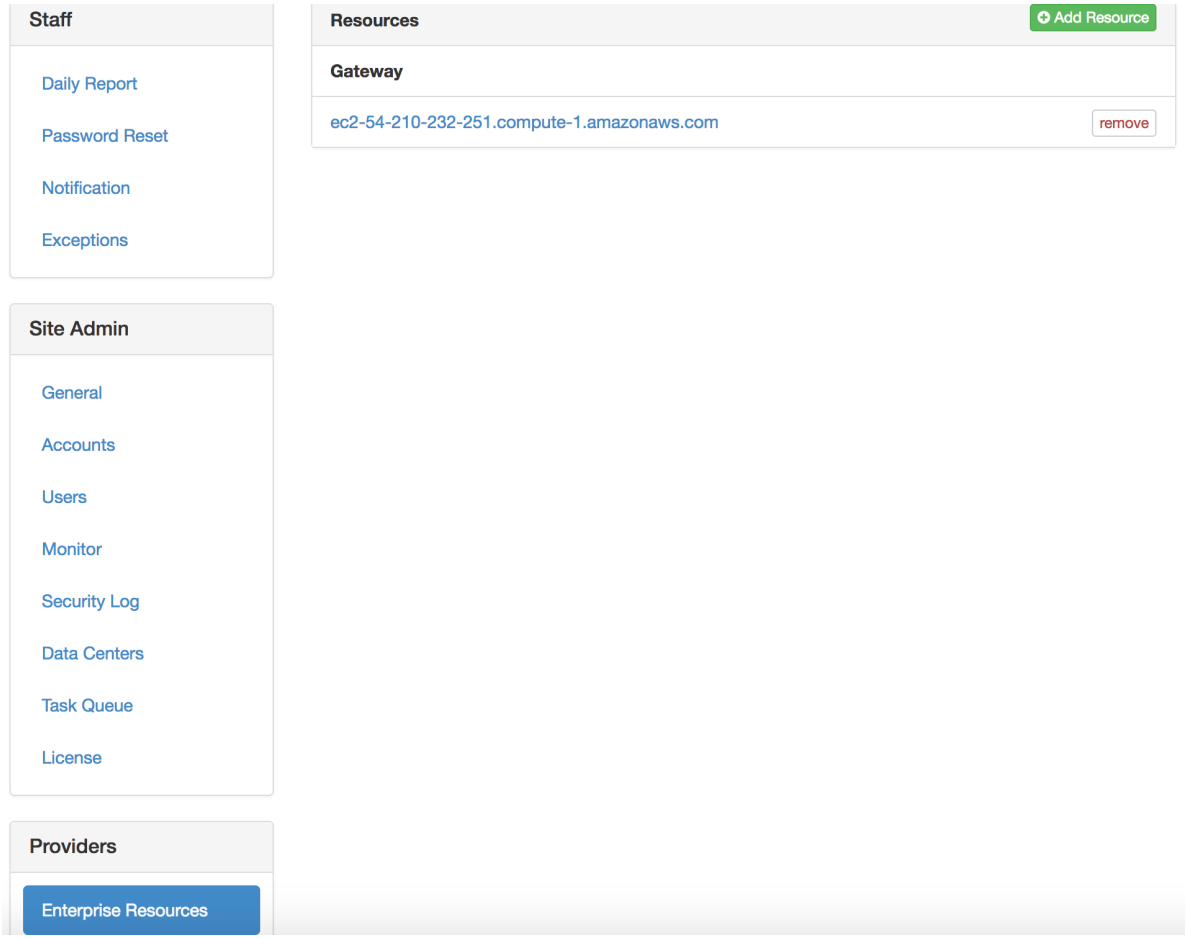
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

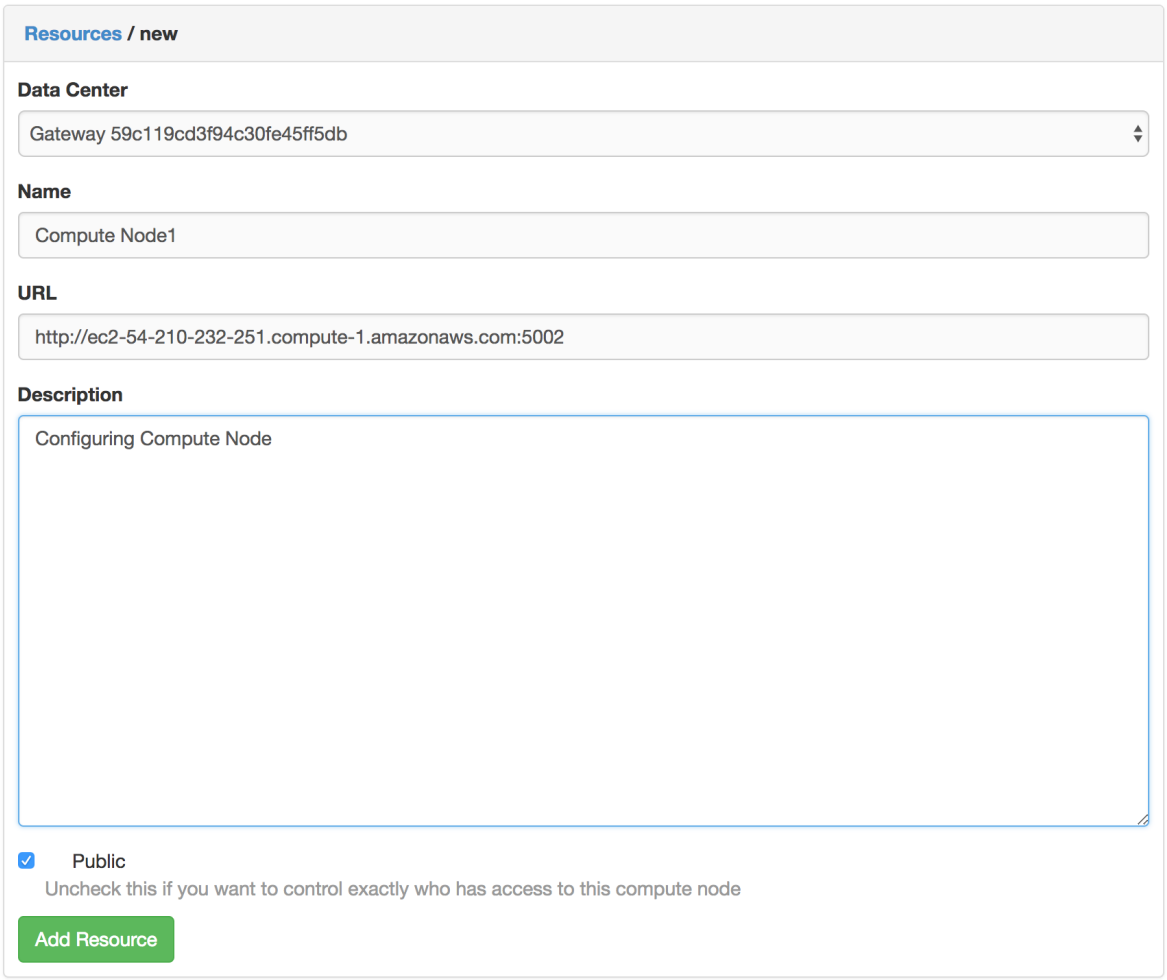
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

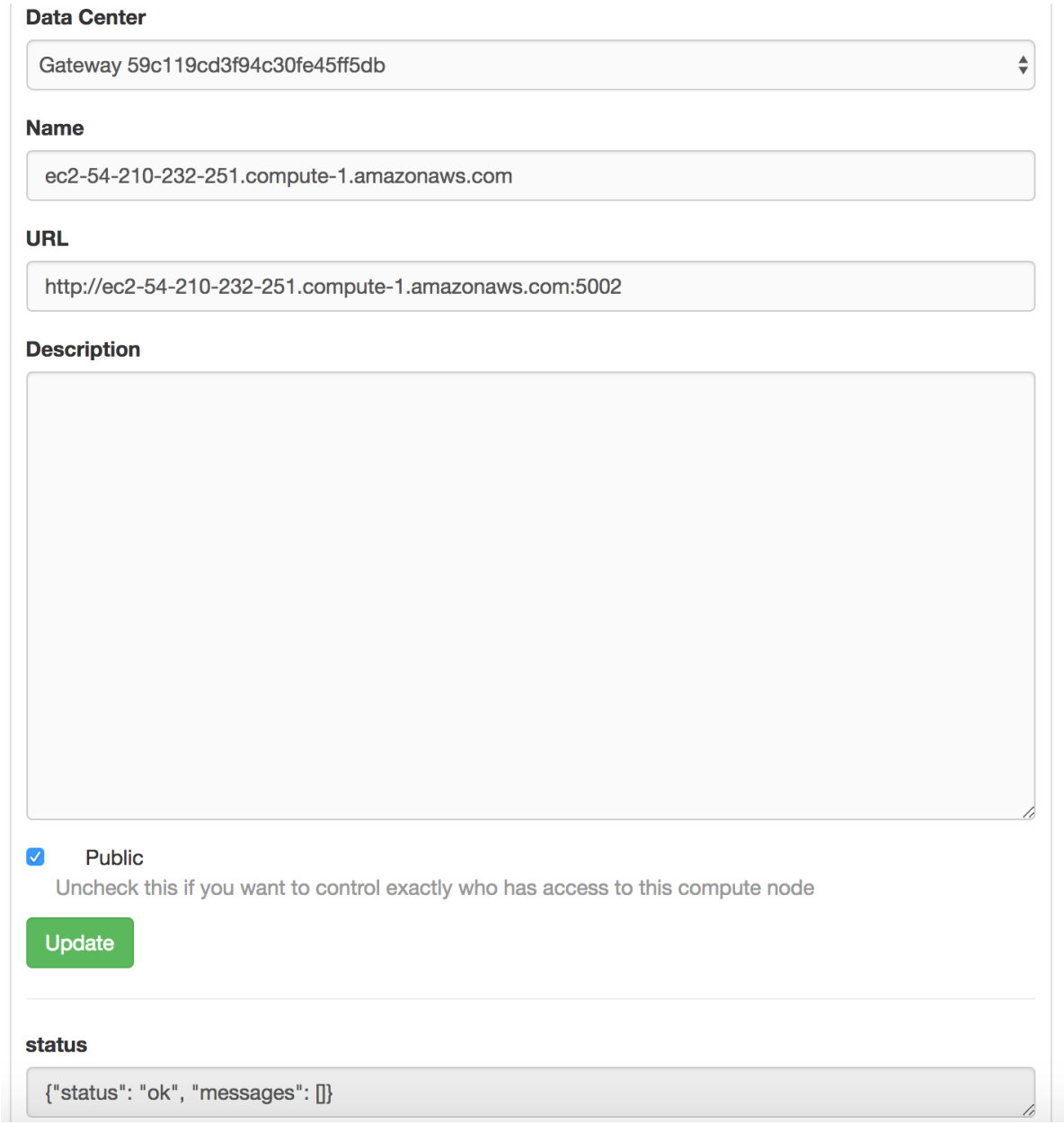
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

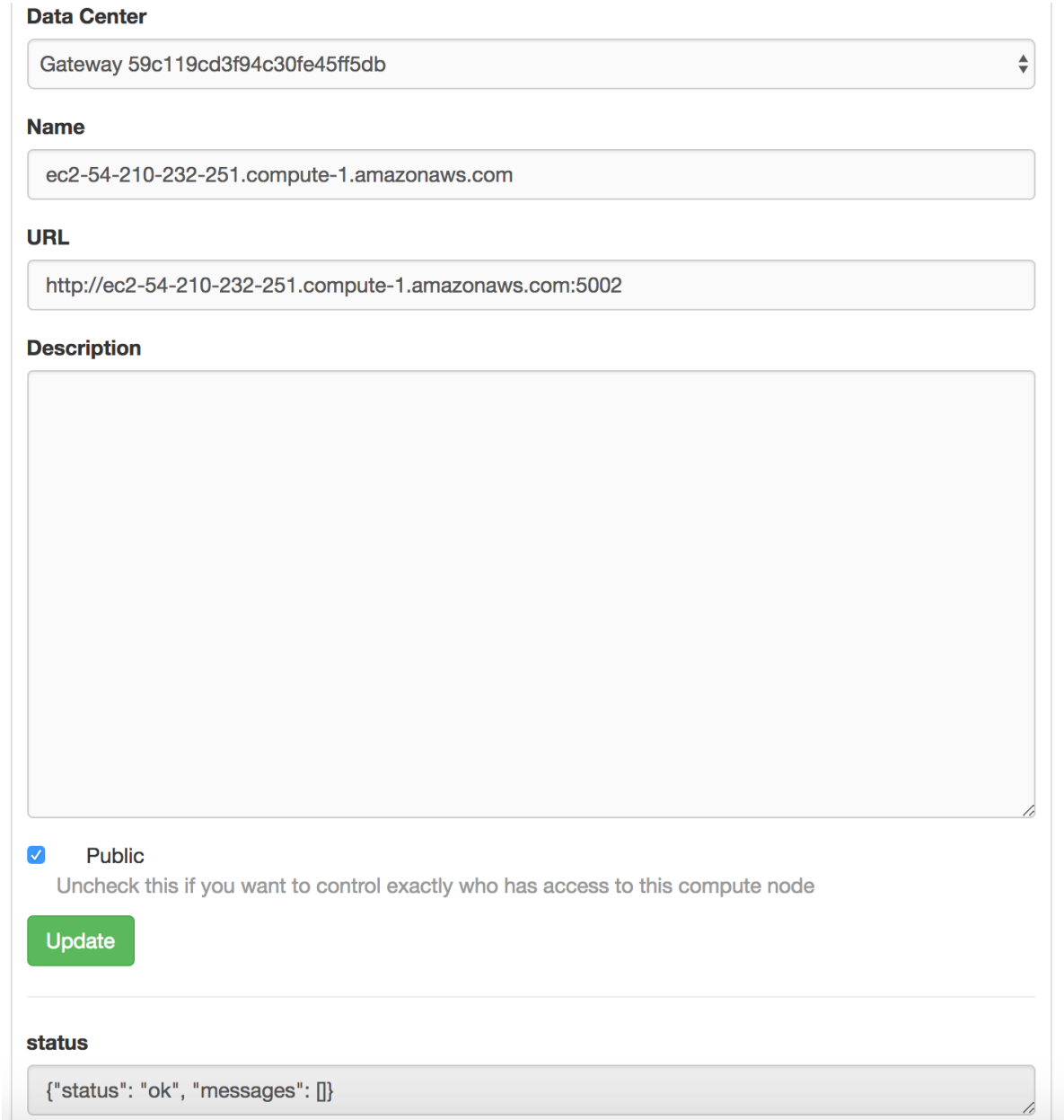
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, *move the project to a valid Compute Resource*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                        RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                           RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

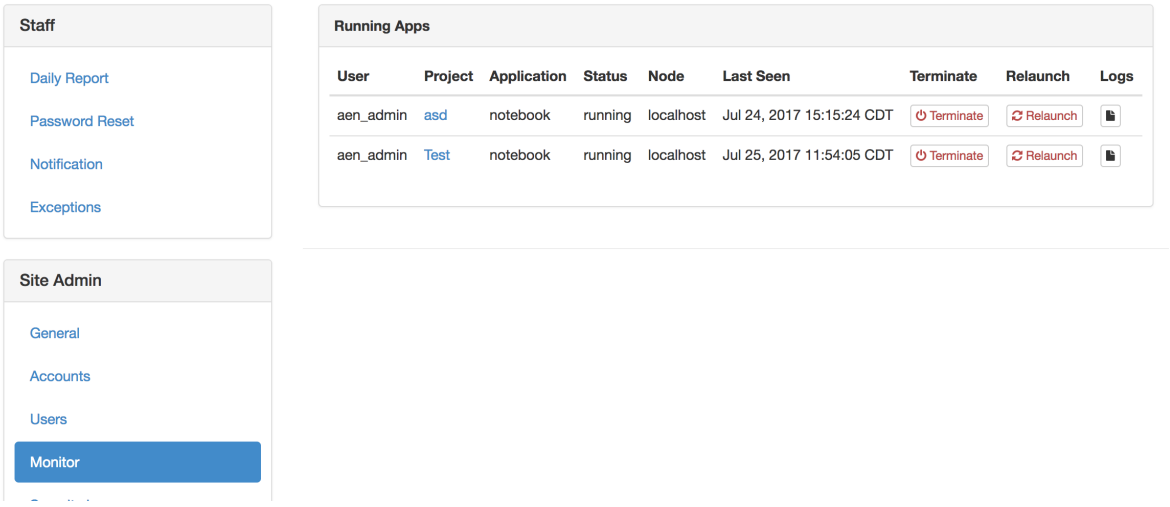
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

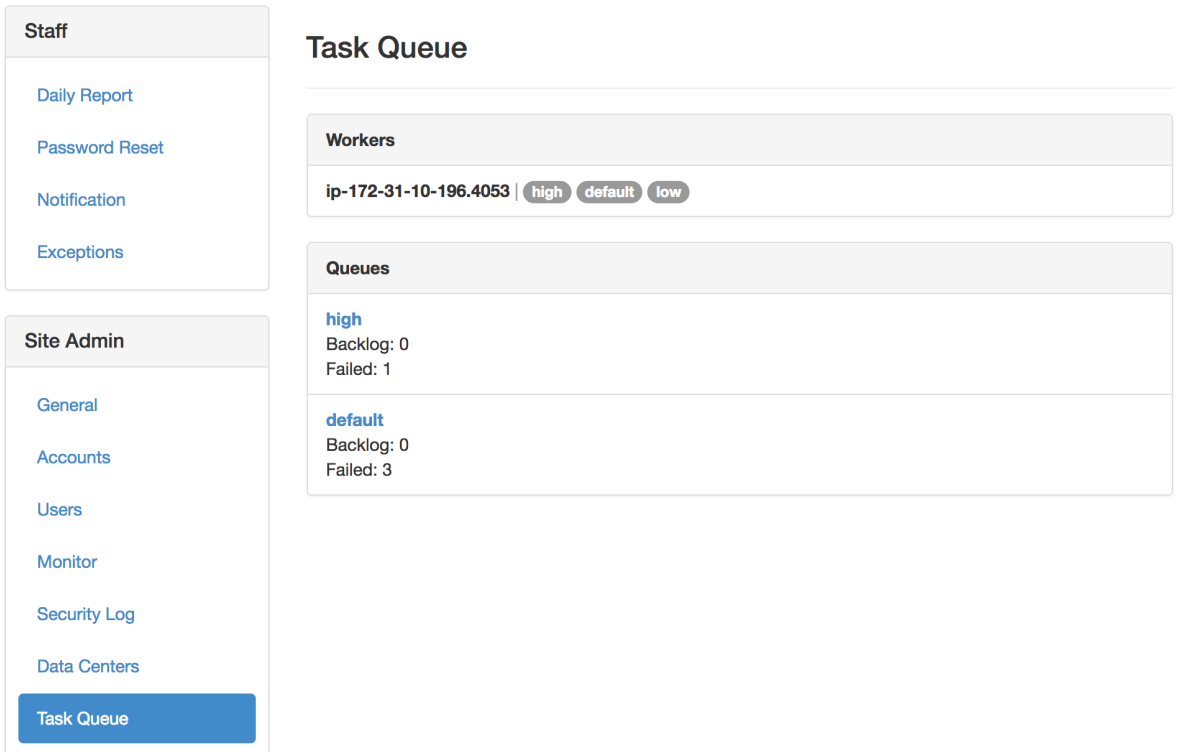
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

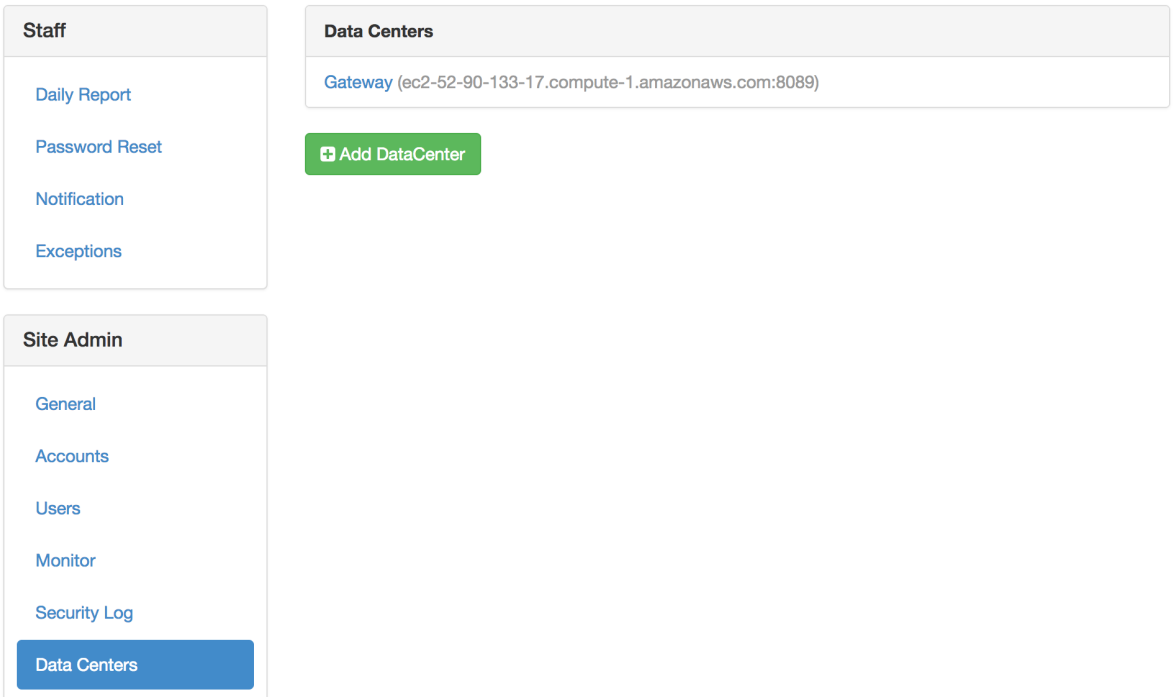
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



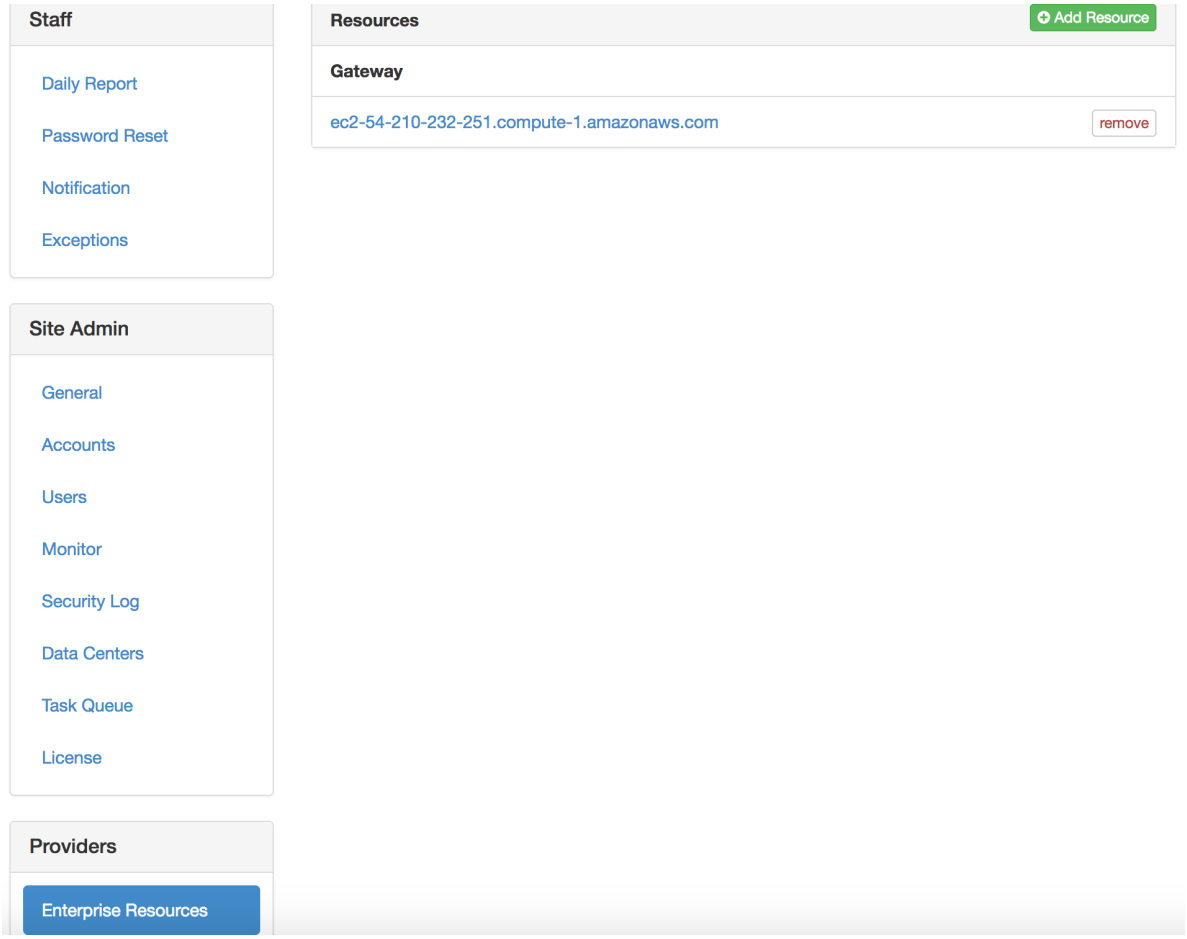
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

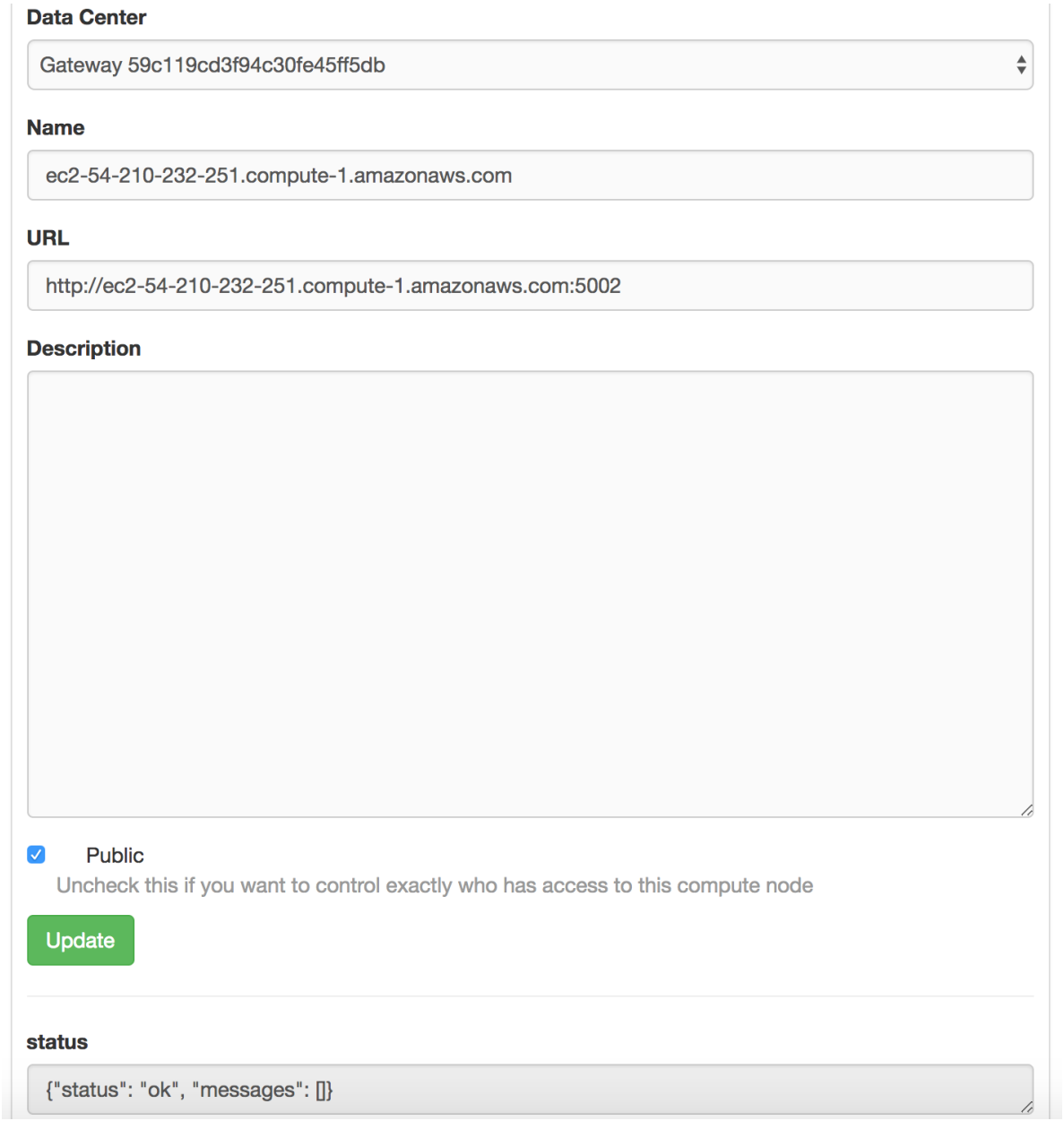
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

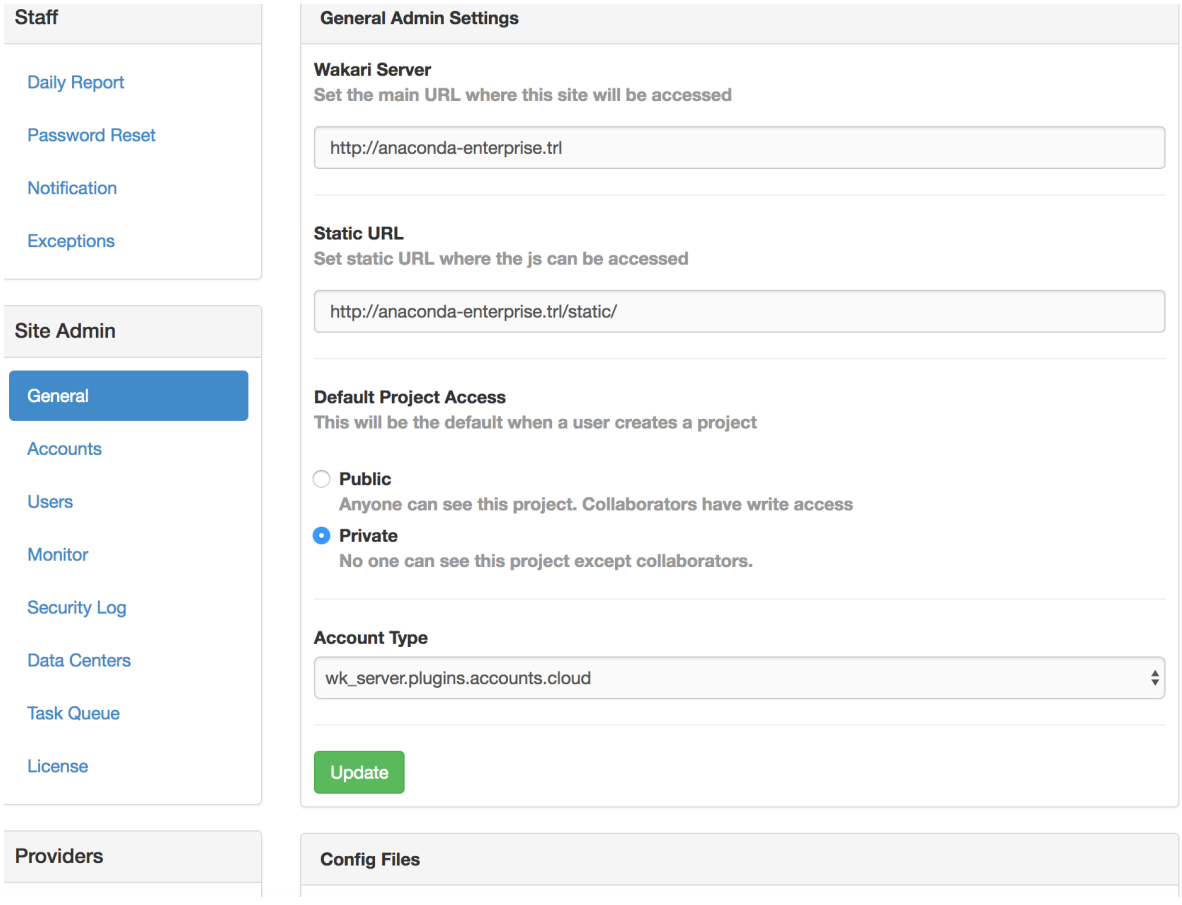
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

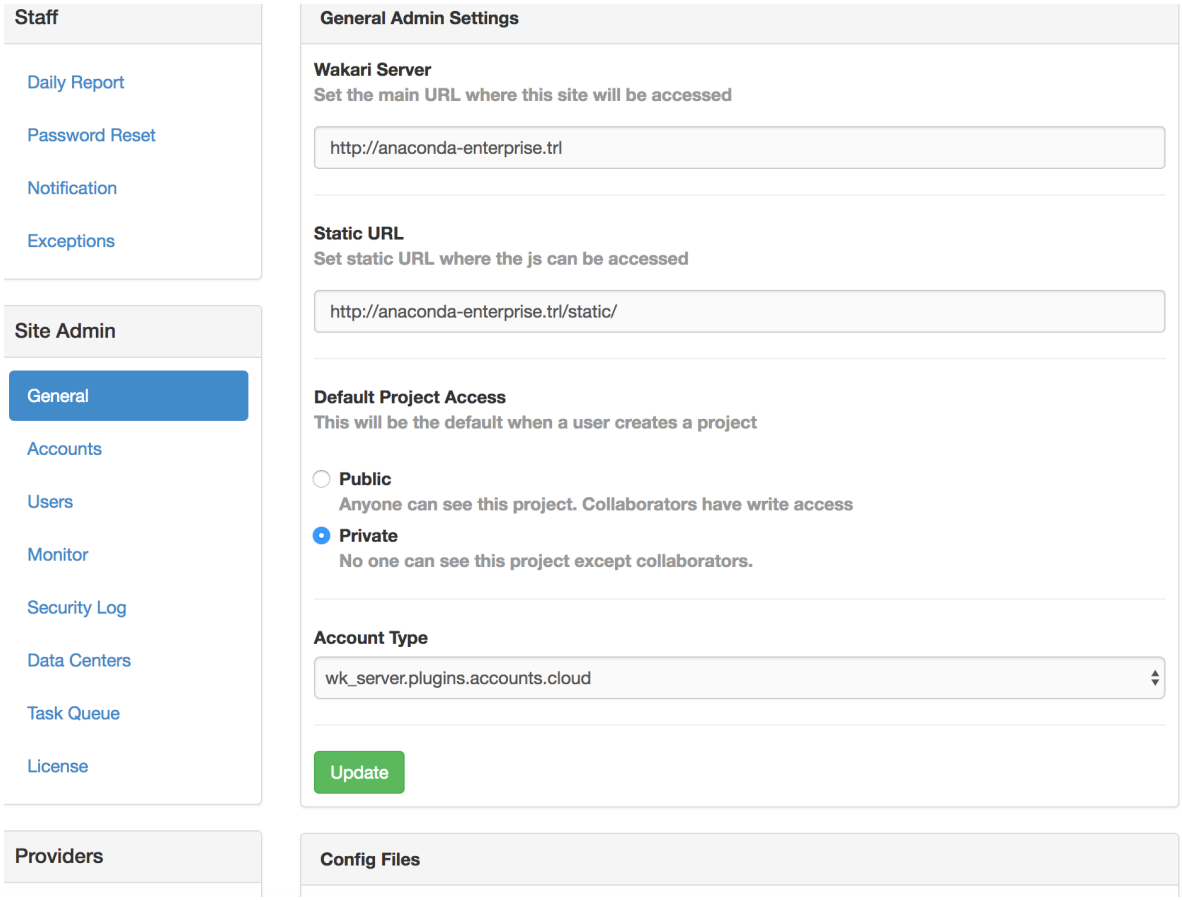
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

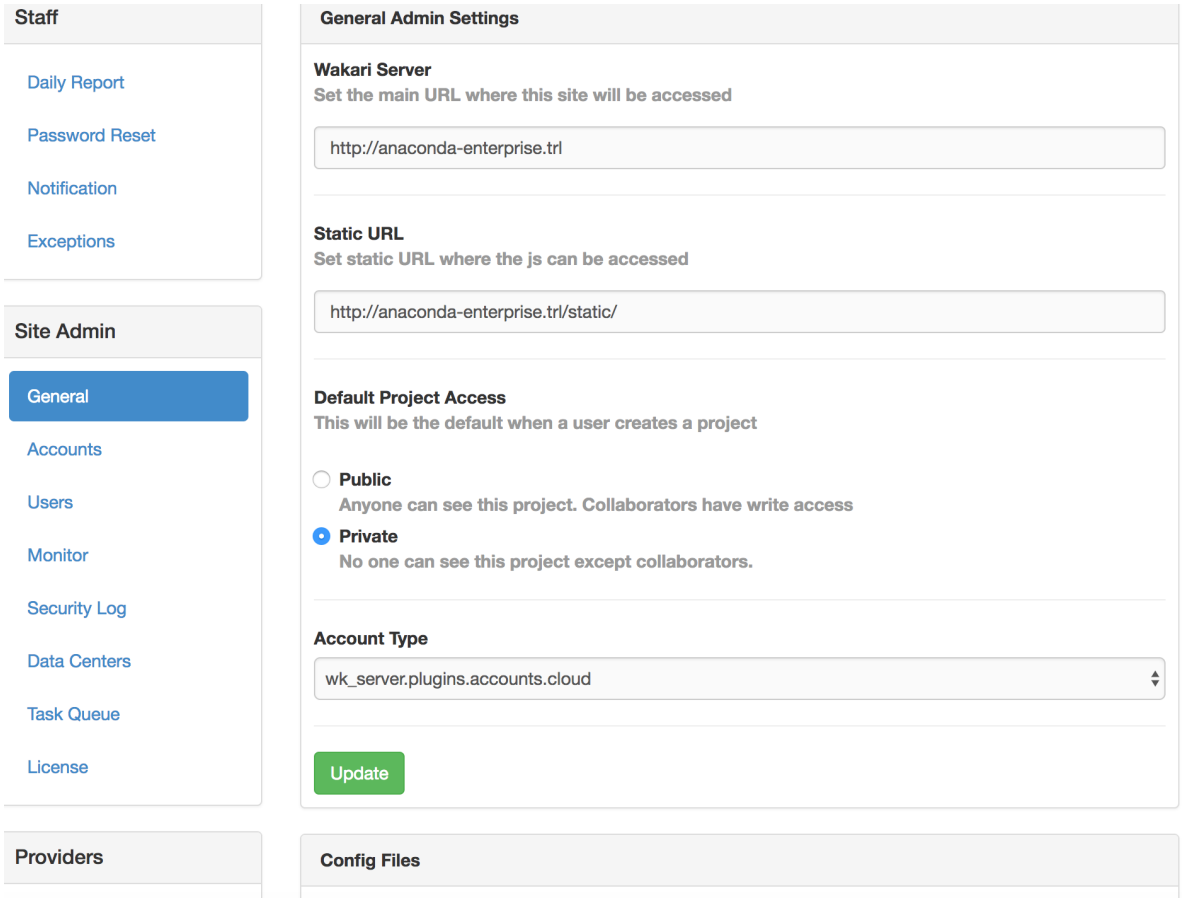
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

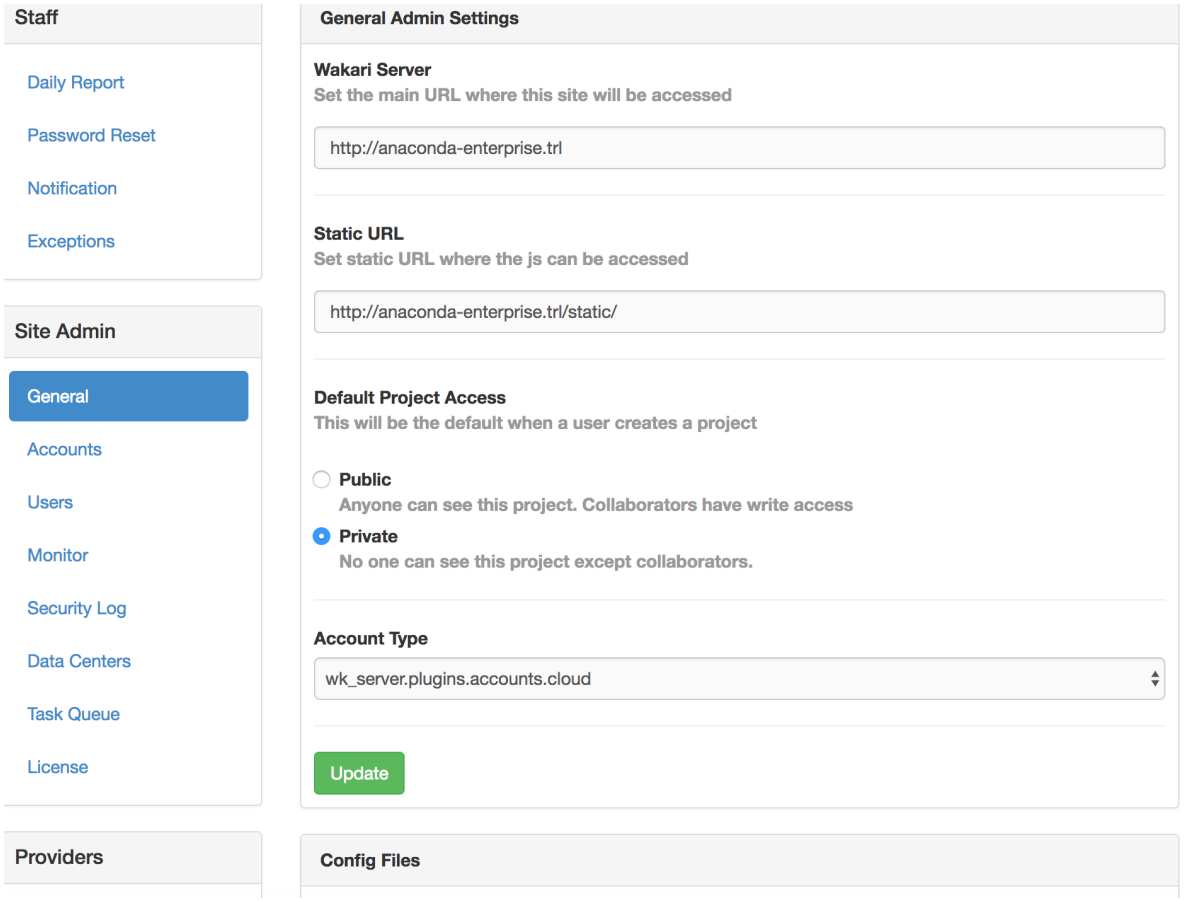
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

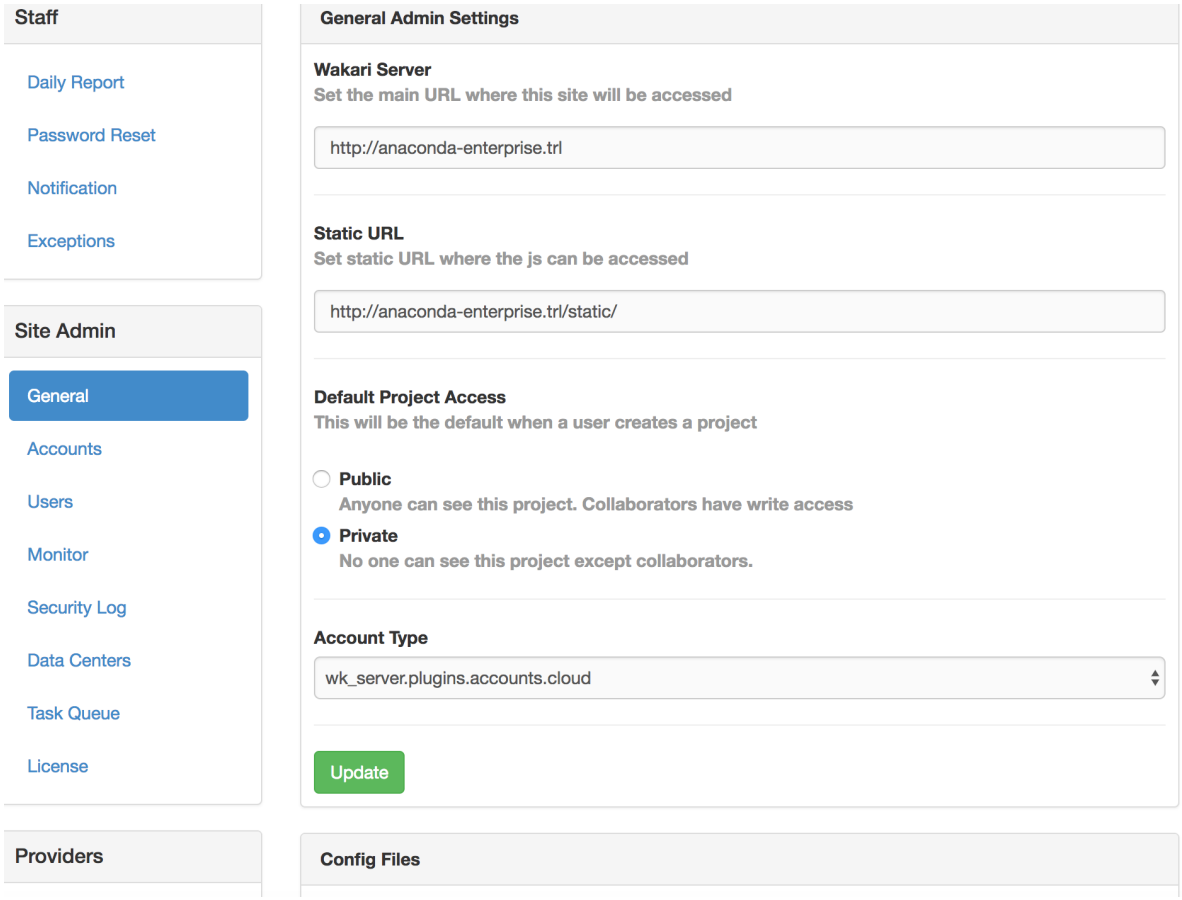
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

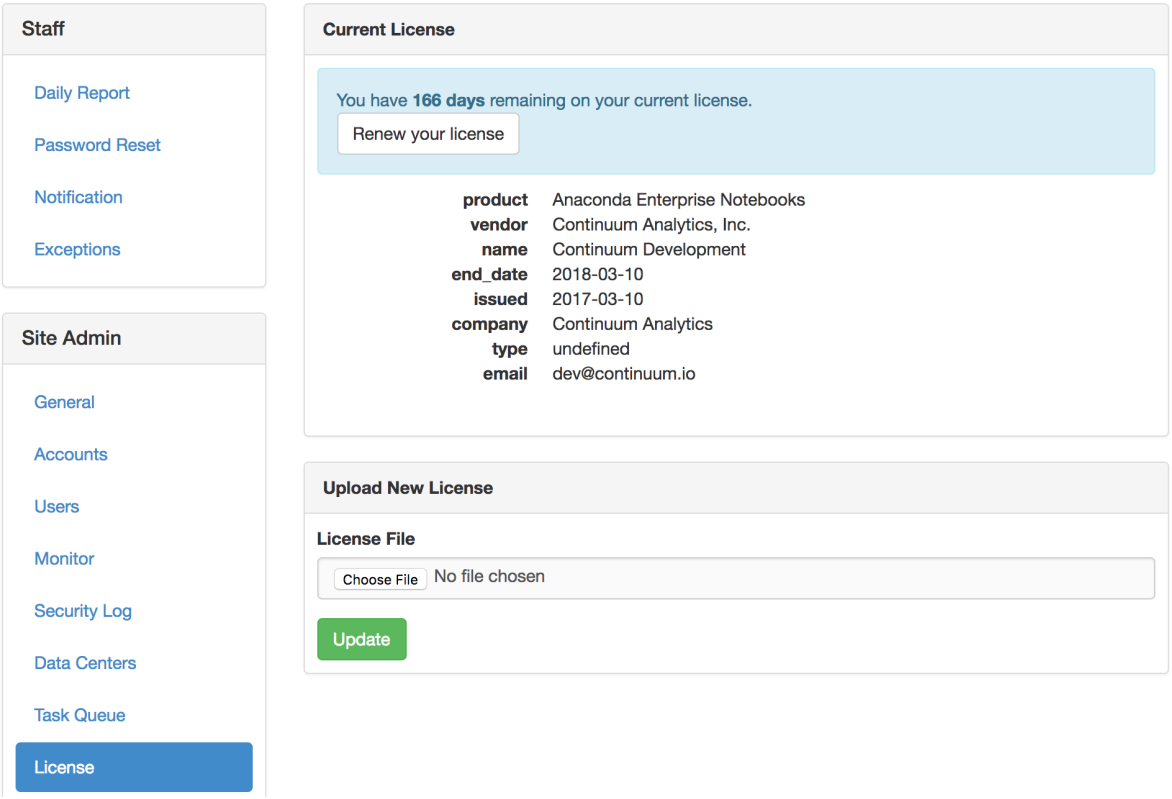
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.

7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.

3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise 4 Notebooks*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the AEN_SRVC_ACCT and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.3.3 Nov 5th, 2019

Administrator-facing changes:

- Support fetching packages from the `main` channel
- Add a new configuration key `emptyDefaultChannels` to avoid searching packages from the `free` channel
- Documentation updates

User-facing changes:

- Remove gdal and basemap
- Update ipykernel, jupyter_core and jupyter_client
- Update astropy, scikit-learn, dask, numba, numpy, scipy, pandas and matplotlib

Internal Fixes:

- Update Python to version 2.7.17
- Update Angular to version 1.7.8
- Update urllib3 to version 1.25.3
- Update Node.js to version 10.15.3
- Replace pycrypto with pycryptodome 3.8.2
- Update paramiko to version 2.60
- Update jinja2 to version 2.10
- Update request to version 2.88
- Update grunt to version 1.0.4
- Update requests to version 2.22.0
- Update gunicorn to version 19.9.0
- Update openldap to version 2.4.46
- Update python-ldap to version 3.2.0
- Removed growl and superagent dependencies

- Update rbase and r-essentials to version 3.5.1

v4.3.2 May 29, 2019

Internal Fixes:

- Update Bootstrap to version 4.3.1
- Update jQuery to version 3.3.1
- Update jQuery UI to version 1.12.1
- Update notebook to version 5.7.8
- Update ipywidgets to version 7.4.2
- Update ipyparallel to version 6.2.3
- Set Secure flag on xsrf, access_token, and refresh_token cookies

v4.3.1 March 25, 2019

Administrator-facing changes:

- Add option for server-side session management
- Add option to terminate terminal sessions on logout

Internal Fixes:

- Set Secure and HTTPOnly flag on session cookies
- Fix XSS vulnerability

v4.3.0 October 24, 2018

Administrator-facing changes:

- Fix bug where compute logging wasn't respecting the `logMaxFiles` key
- Log and display a descriptive error message when there is a problem creating the users index
- Log and display a descriptive error message when there is a problem creating a new user with a duplicated e-mail address when the `uniqueEmail` setting is enabled
- Add footer server pages with server host data (IP, AEN version and server version)
- Fix admin script to change the status of private projects
- Fix validation error when updating/editing an existing resource
- Docs: Add KB article about using MongoDB to update old projects with new Data Center information
- Docs: Add restarting service step to SSO documentation
- Docs: Add support for newer versions of MongoDB
- Docs: Add documentation on `uniqueEmail`
- Docs: Add `projDirsAsHome` key to config docs
- Docs: Rewrite the "Using project directories as home directories" section

- Docs: Add full path to admin commands
- Docs: Warn about upgrading away from tested pkgs
- Docs: Add missing steps to "Authenticating with LDAP" section
- Docs: Add troubleshooting documentation about orphaned projects
- Docs: Warn about not using IP address when you connect to AEN
- Docs: Add an entry about 'Error starting projects' in the troubleshooting page
- Docs: Rewrite "Group and user permissions for NFS" section and description of the `identicalGID` key in the config pages
- Docs: Add a new section about using MRO packages in AEN (Update: MRO was discontinued in 2021)
- Docs: Preserve username capitalization when using LDAP/AD
- Docs: Add umask 0022 to security requirements
- Docs: Add new section about changing install location
- Docs: Add note about how to manually break out Root CA for the gateway
- Docs: Add note about upgrading custom environments
- Docs: Add notes about how to find conda config files inside AEN
- Docs: Add note about using `USE_SERVER_BASED_SESSIONS: false` when configuring SSO between AEN and versions 2.33.3 through 2.33.10 of the Repository

User-facing changes:

- Increase Workbench file upload limit
- Fix Bokeh examples
- Extend `nb_locker` to detect a server disconnection and generate an alert if it occurs
- Docs: Update the notebook app to correctly point to AEN docs
- Docs: Emphasize that permissions are not applied recursively in the workbench

Internal fixes:

- Update Nginx version to v1.12.2
- Remove unused server config file during the compute upgrade process
- Remove already defined compute default settings from the post-script step
- Pin widgetsnbextension version to prevent version mismatch issue (ipywidgets)
- Remove `--offline` flag from the conda clone operations
- Support MongoDB 3.4.14 and update pymongo to version 3.2.2
- Fix LDAP username case sensitivity
- Security fixes and enhancements

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs
- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7
- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date
- Server: Fix bug Monitor Report blank
- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected “ca” key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes
- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace ‘wakari’ wording
- New config option to move the user’s home directory into the user’s project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user’s home directory into the user’s project directory
- Package cache was moved from user’s home directory into the user’s project directory
- Change wakari logos to Anaconda logos
- Fix error for deleting tags to work
- Define shell prompt in `.projectrc` template
- Replace ‘wakari’ wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile

- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application
- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove “wakari” word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair “Create Account” link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating
- Compute resource: Show full path to log file
- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes
- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation
- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089
- Added support for all-numeric usernames
- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher
- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.
- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes

- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Previous versions

Documentation for previous versions of AEN is provided for users who have not yet upgraded to the latest version. See the sidebar for links to other documentation versions.

Anaconda Enterprise 4 Notebooks

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.3.1, released March 25, 2019.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

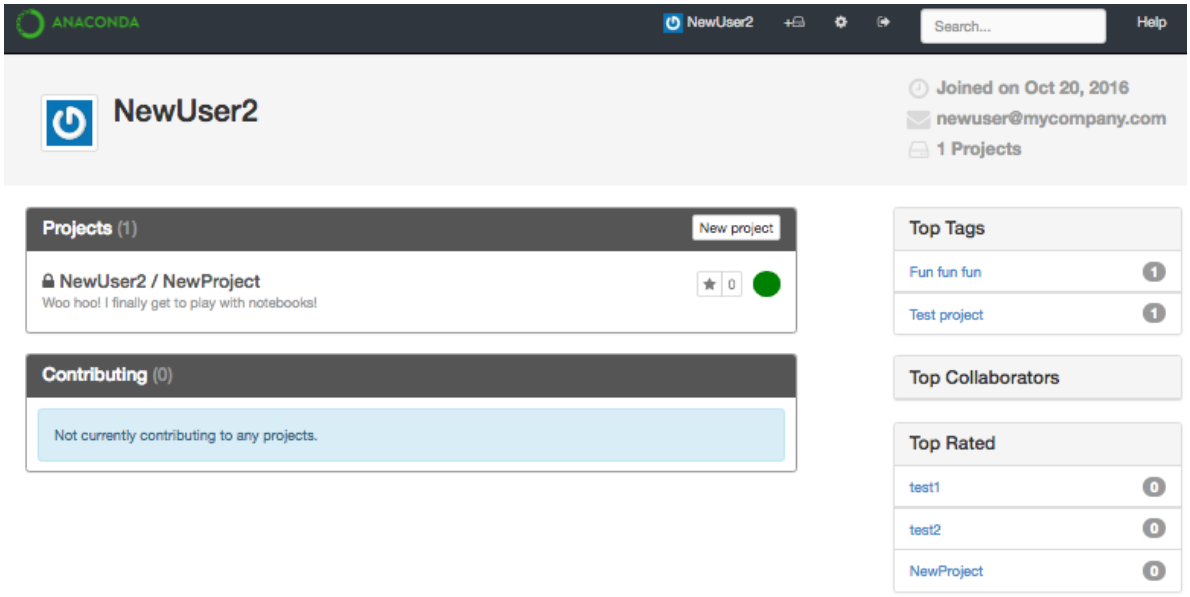
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

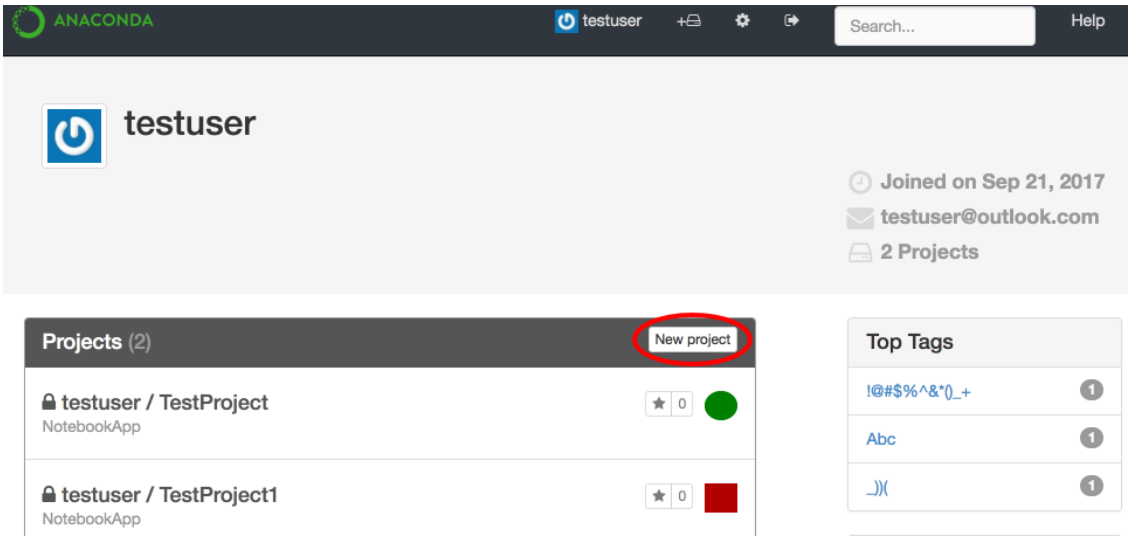
   Your user home page, where all good things happen, is displayed:



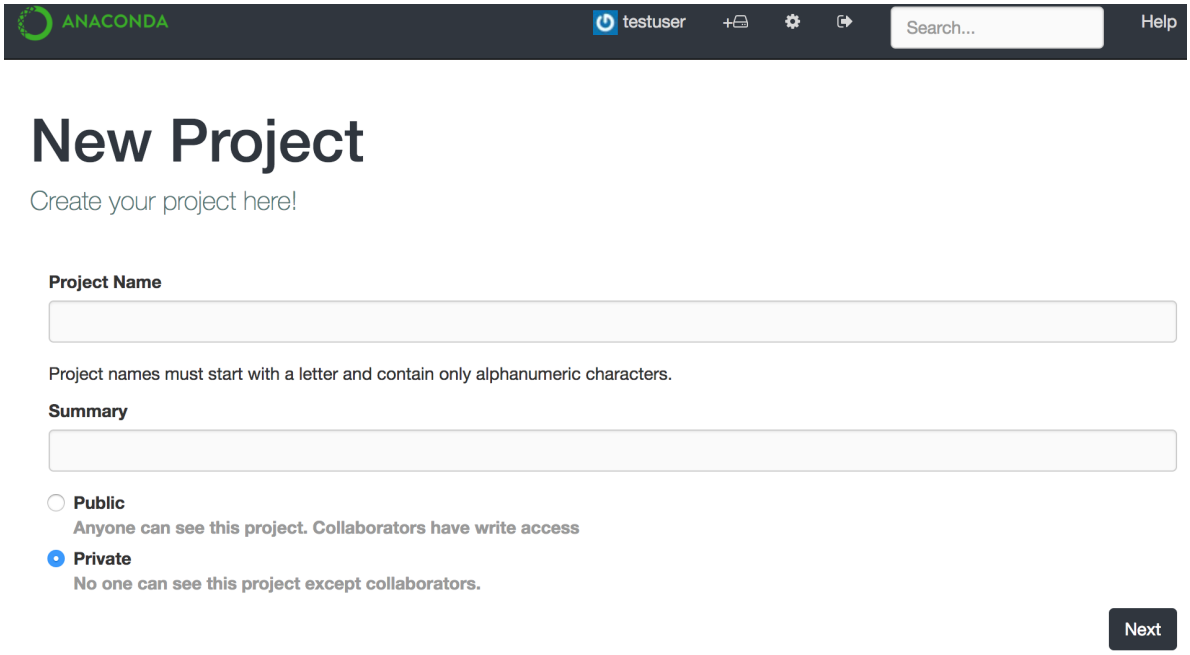
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as “Testing.”

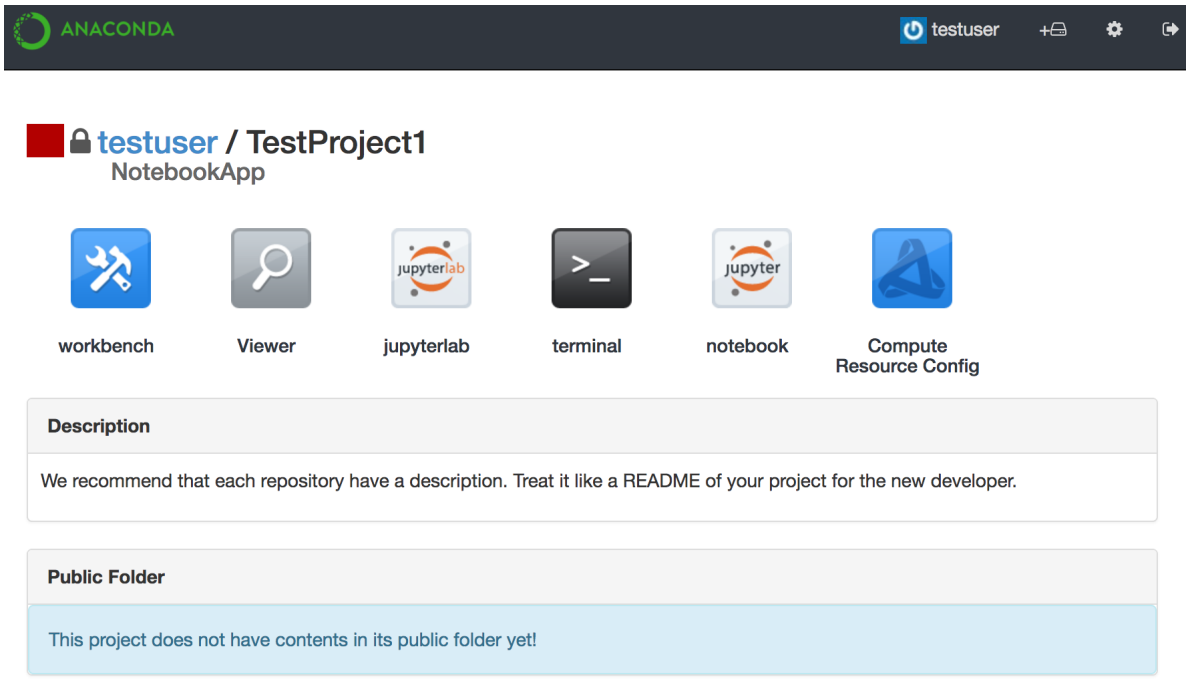


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

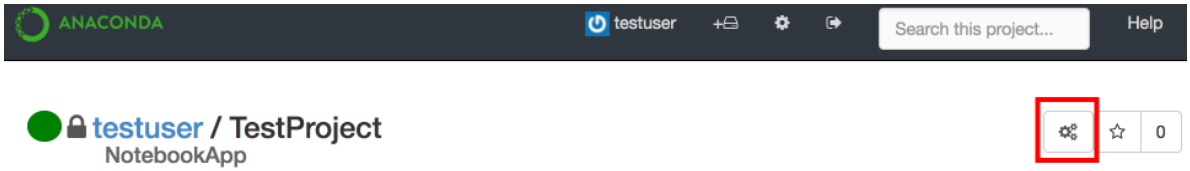
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

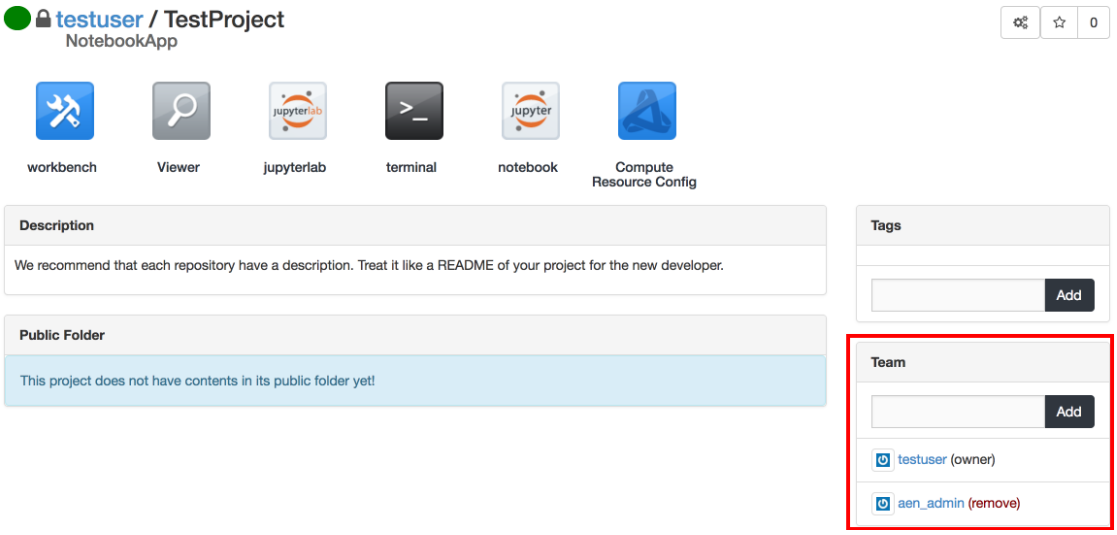
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

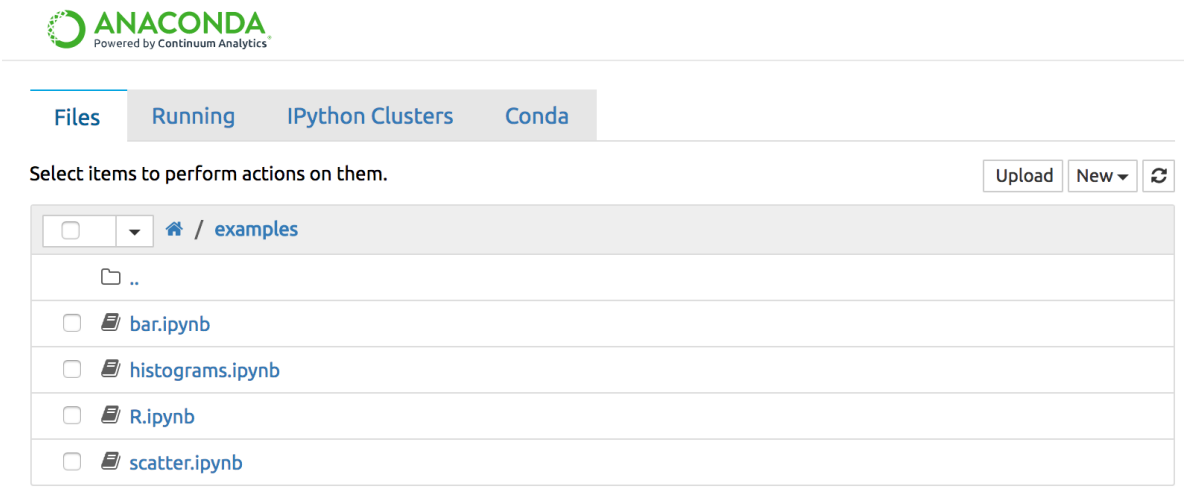


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

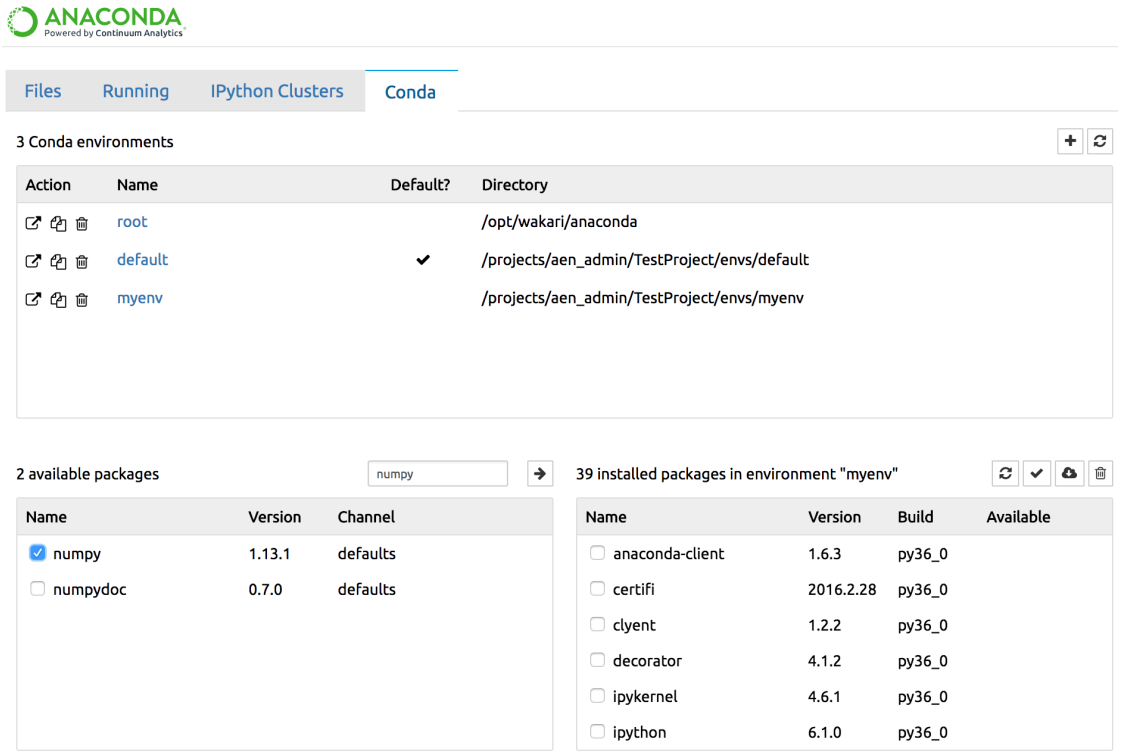
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



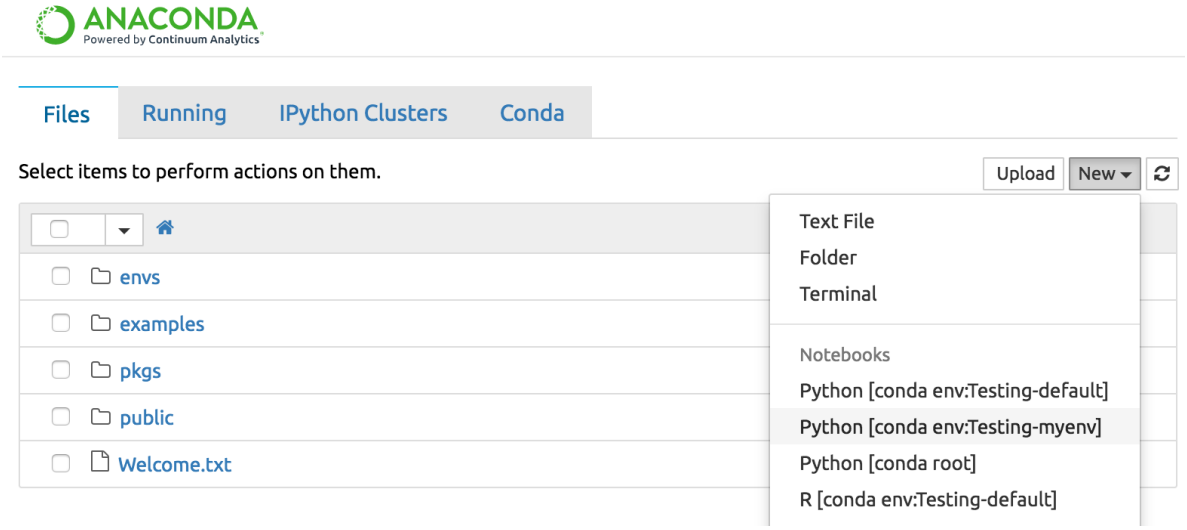
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



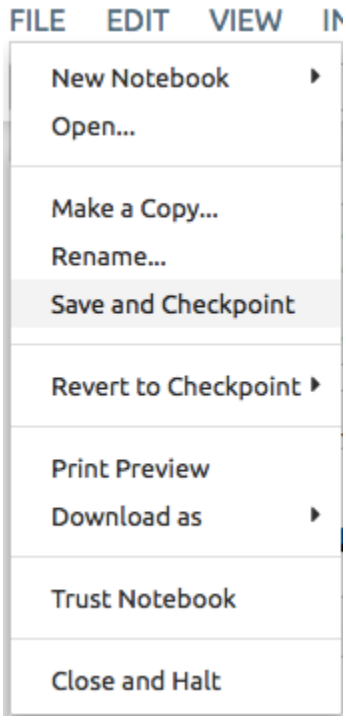
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

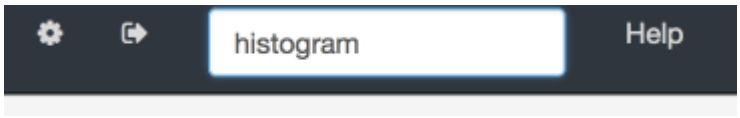
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

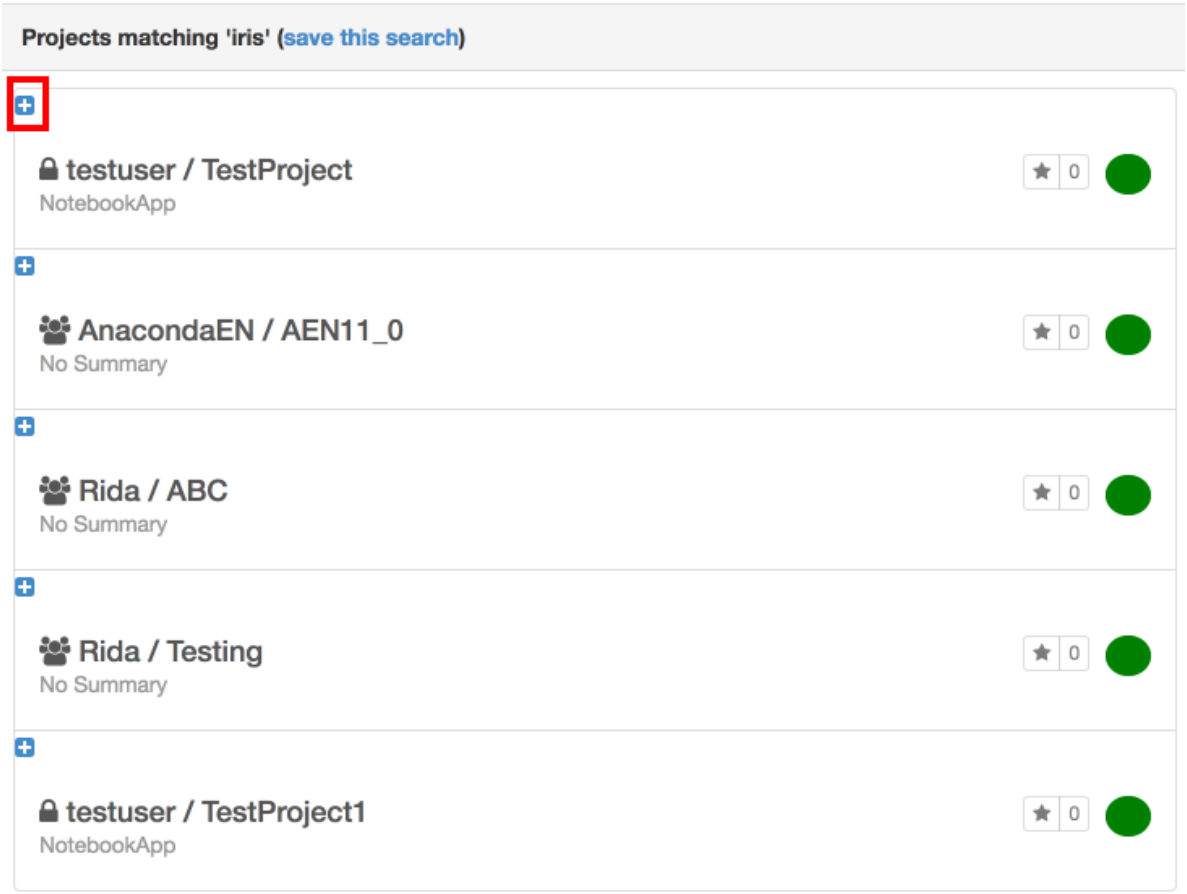
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

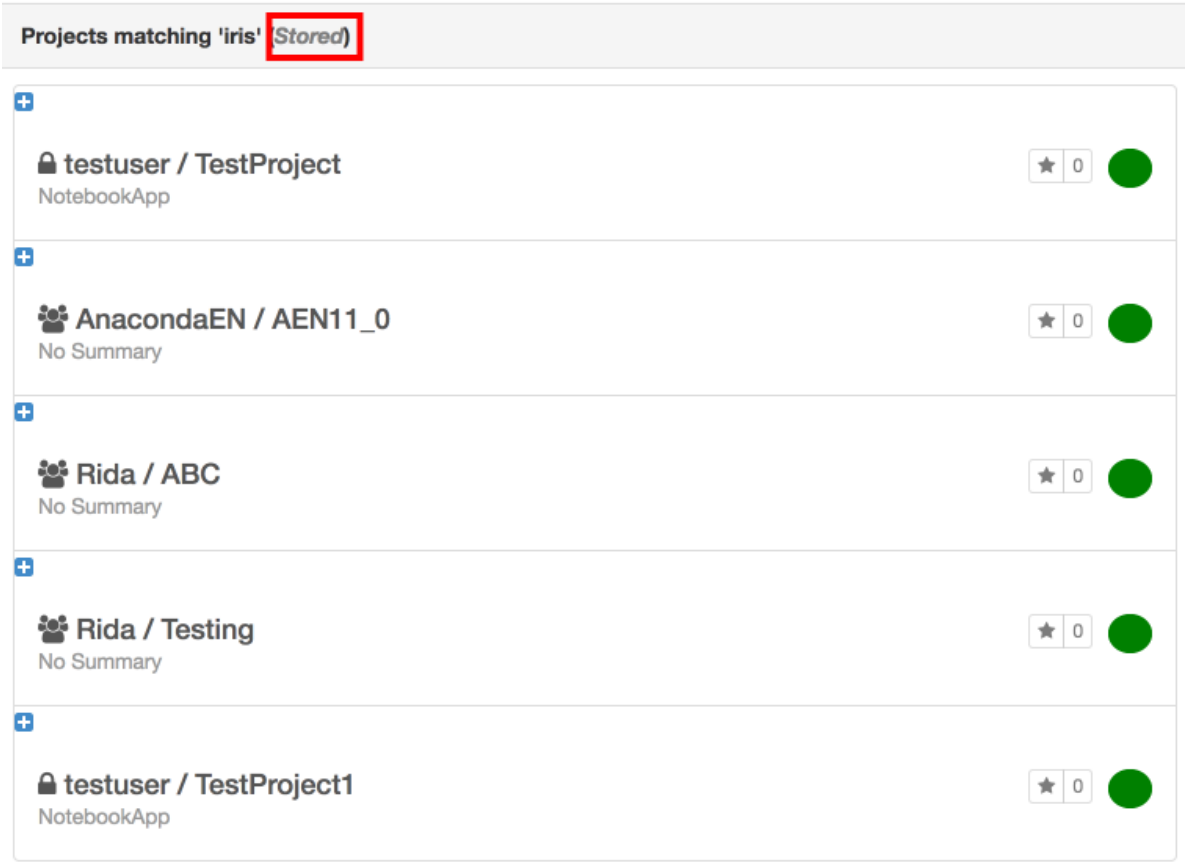


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

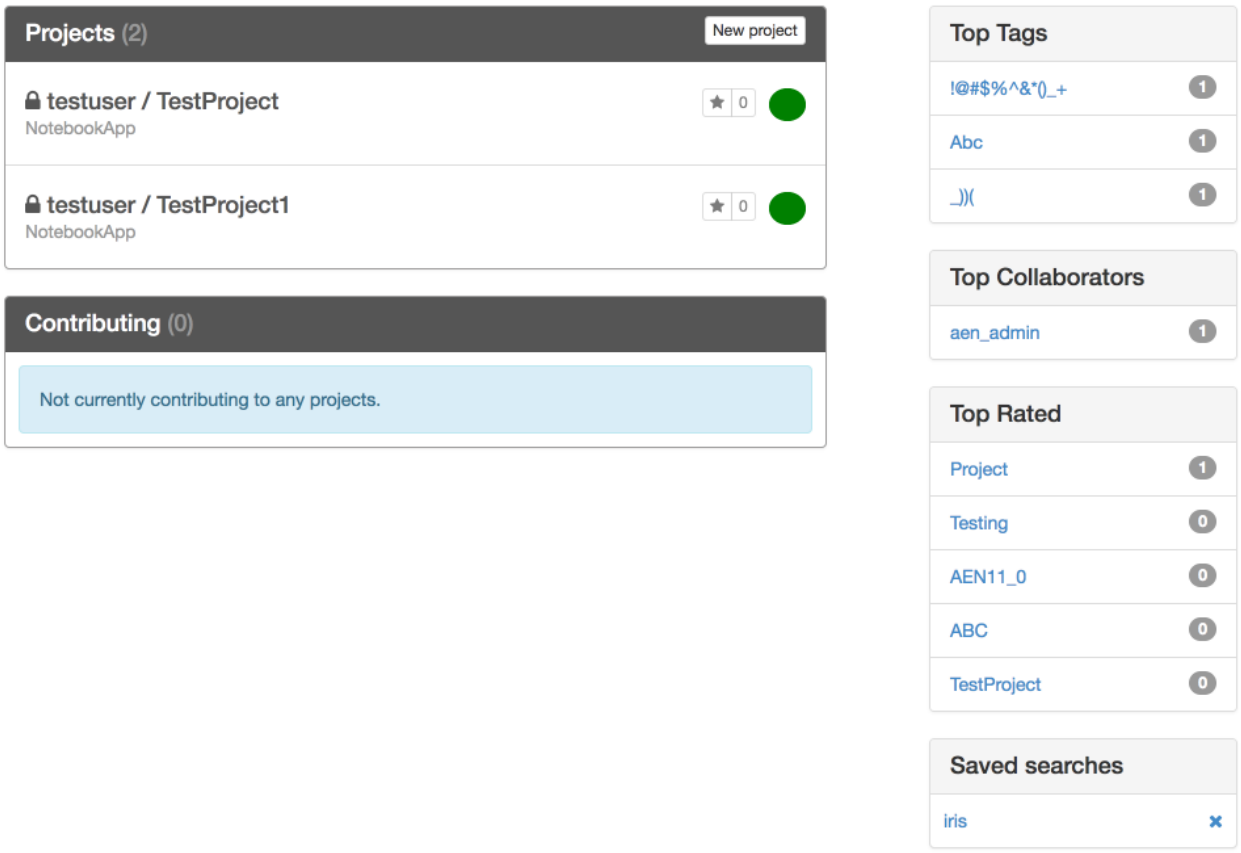
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

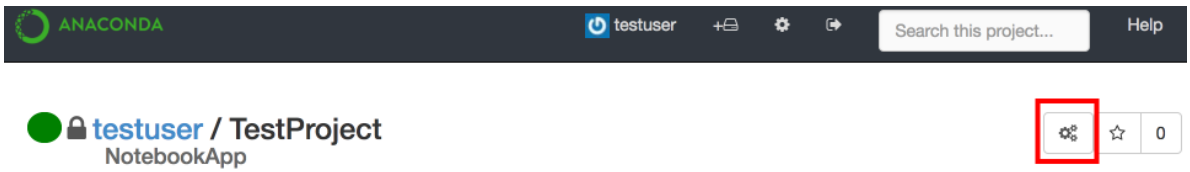
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:

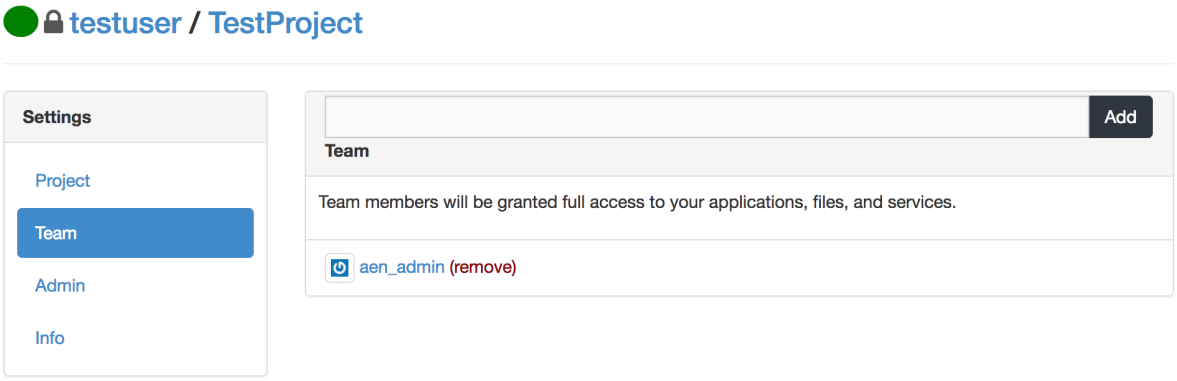


Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.



Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

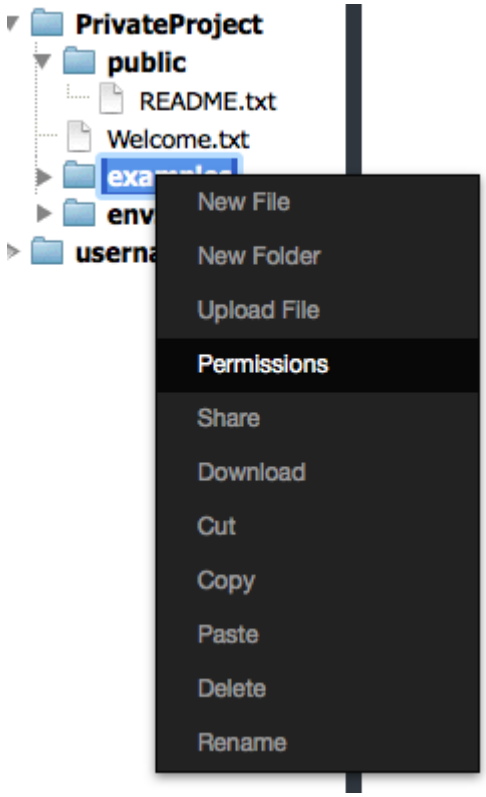
By default, all of the team members on a project have read and write access permissions for all project assets.

The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

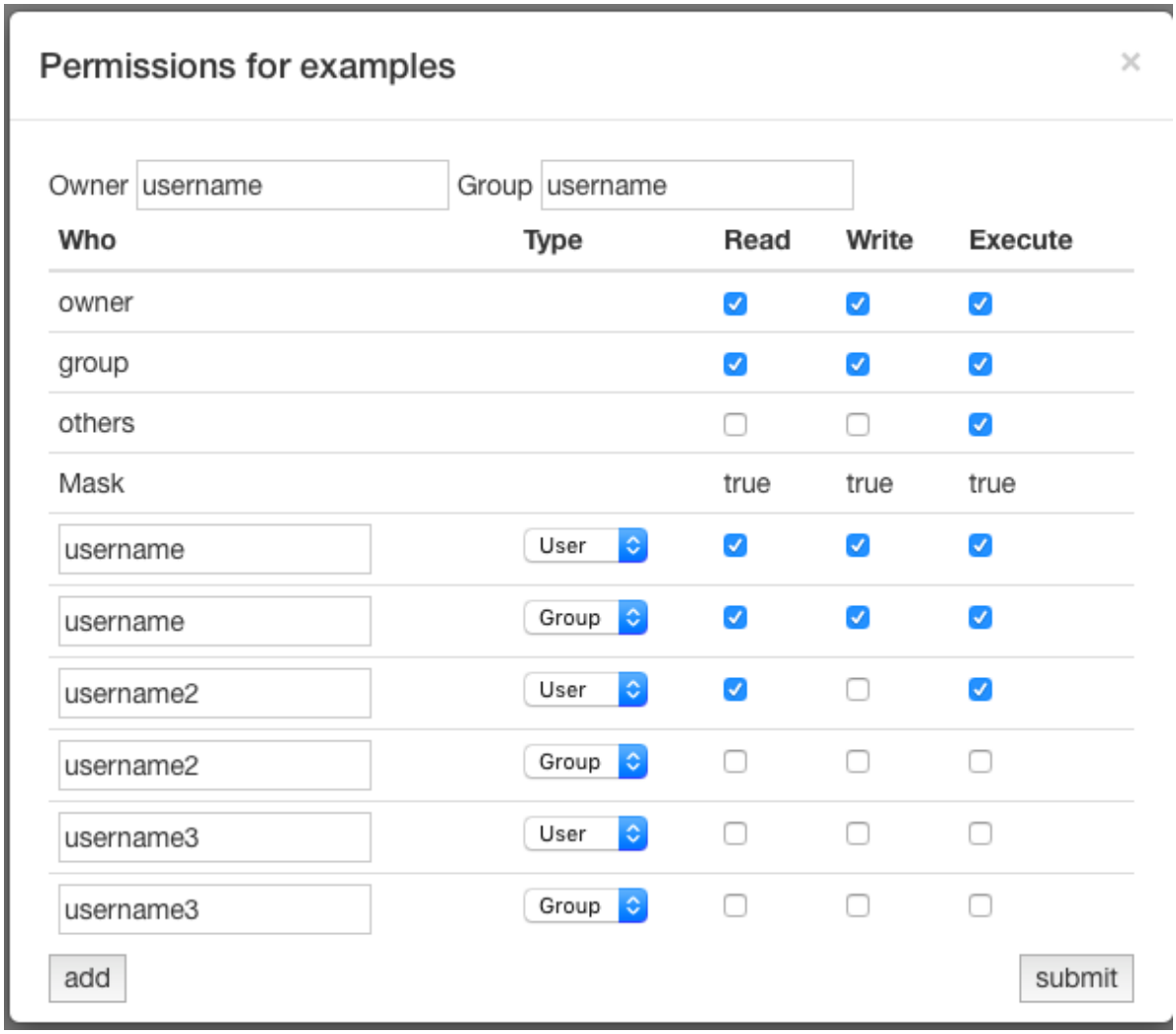
1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.
4. In the menu that displays, select Permissions:



A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

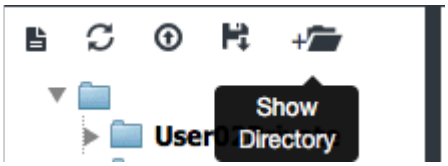
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

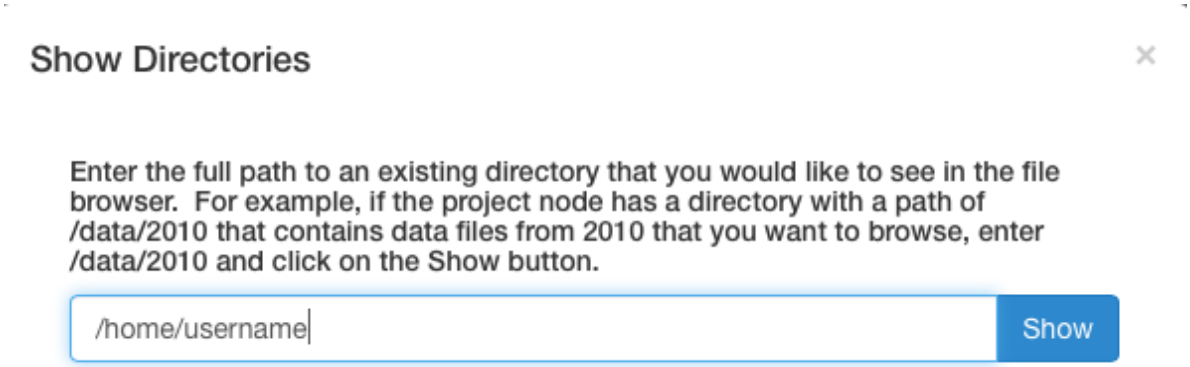
1. Click the Show Directory button at the top of the Workbench File Manager:



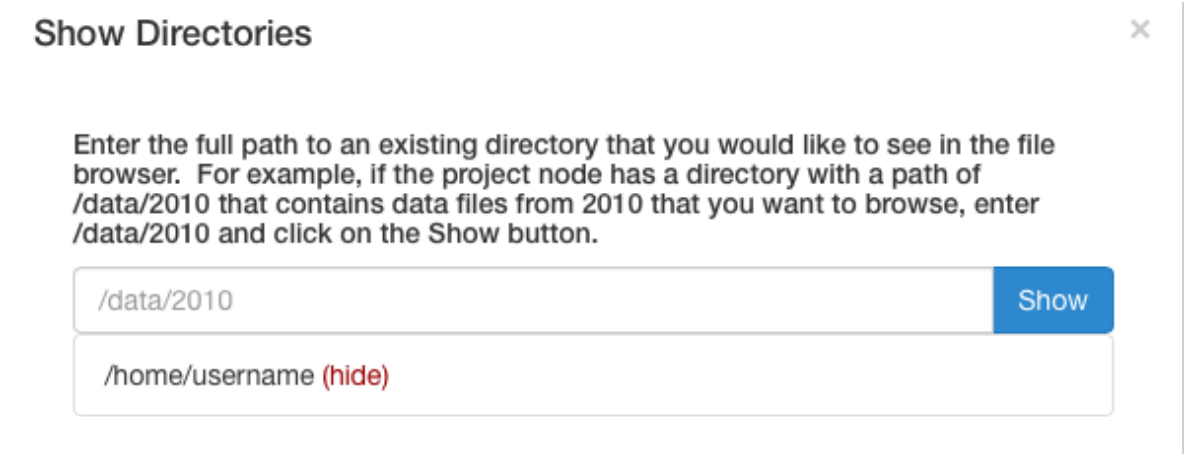
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.

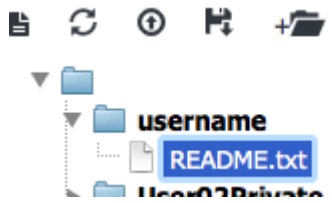


3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

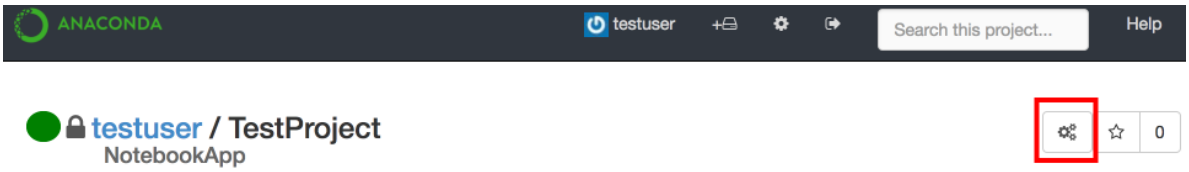
   The shared file is displayed in the File Manager:



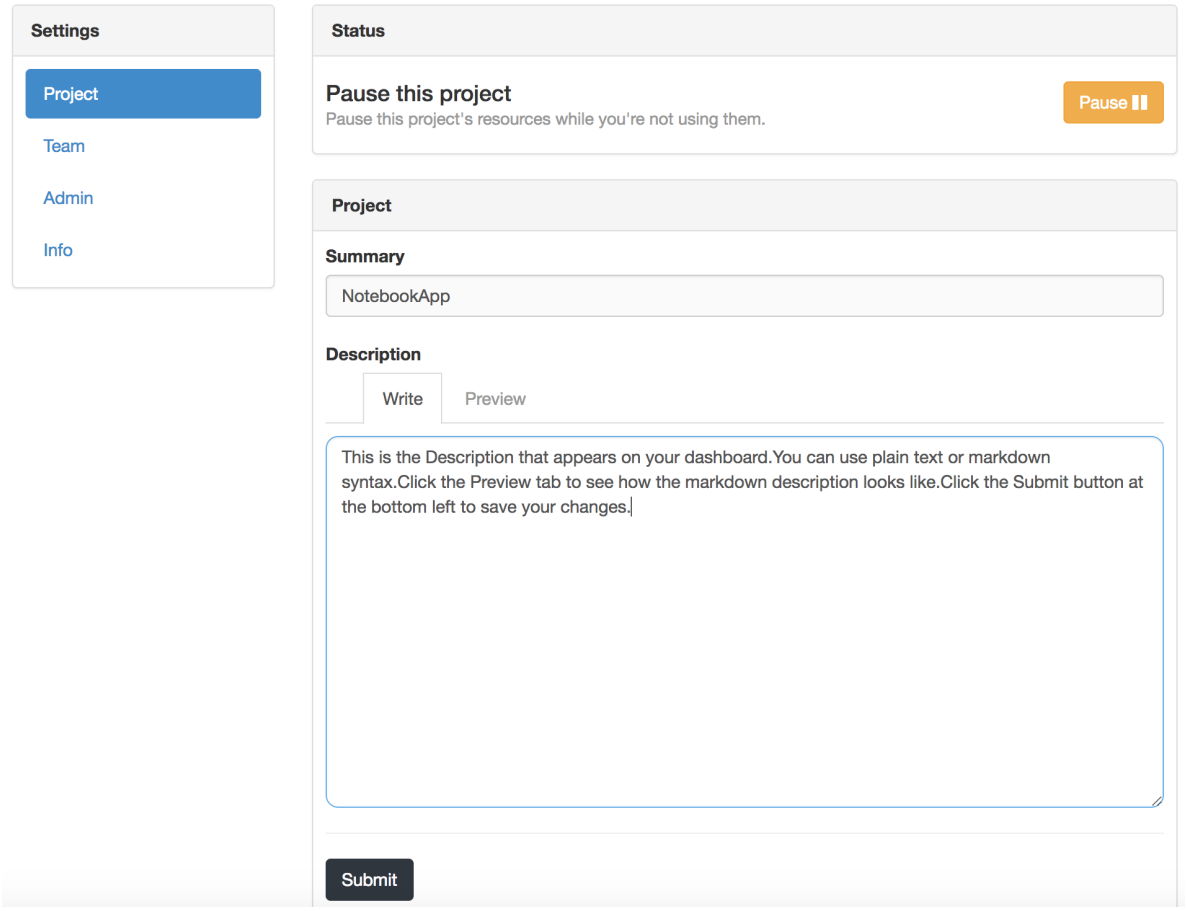
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



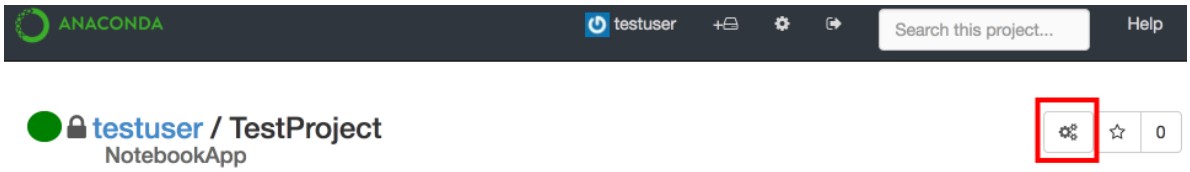
2. In the **Settings** menu, select Project.



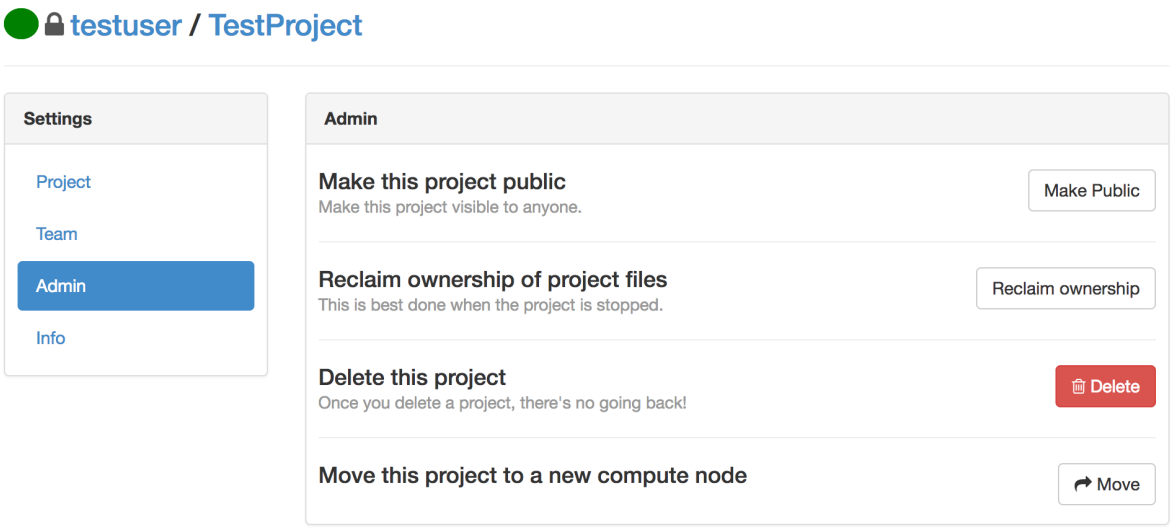
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



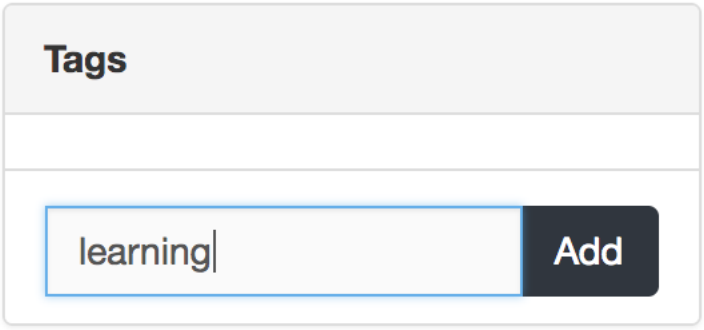
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

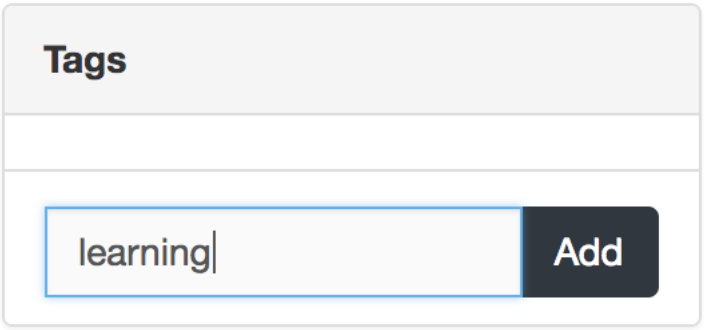
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

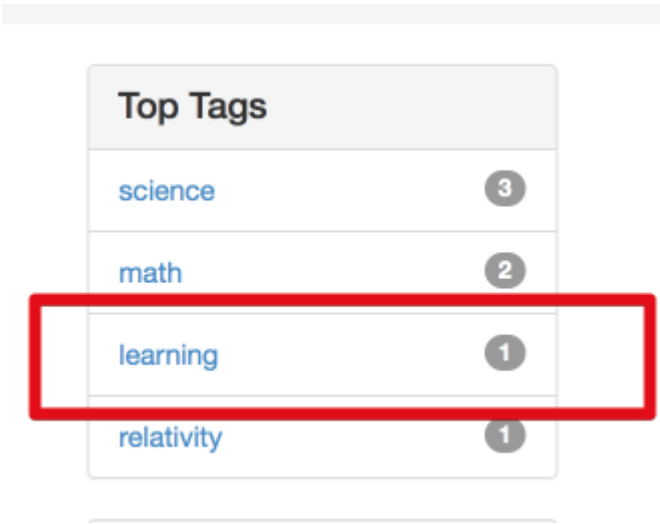


2. Click the Add button.

   The new tag is added to the Tags list:

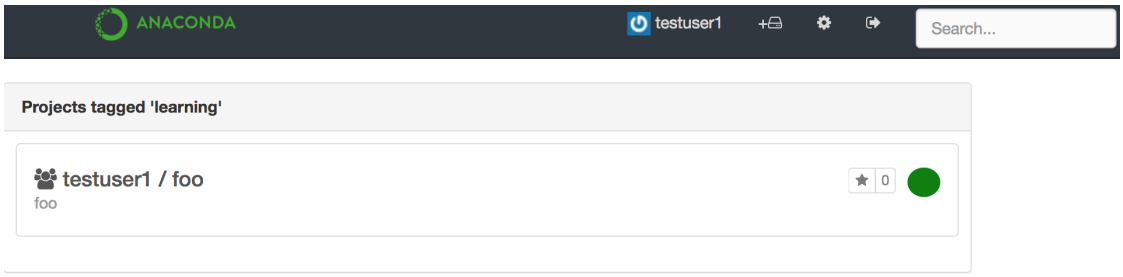


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



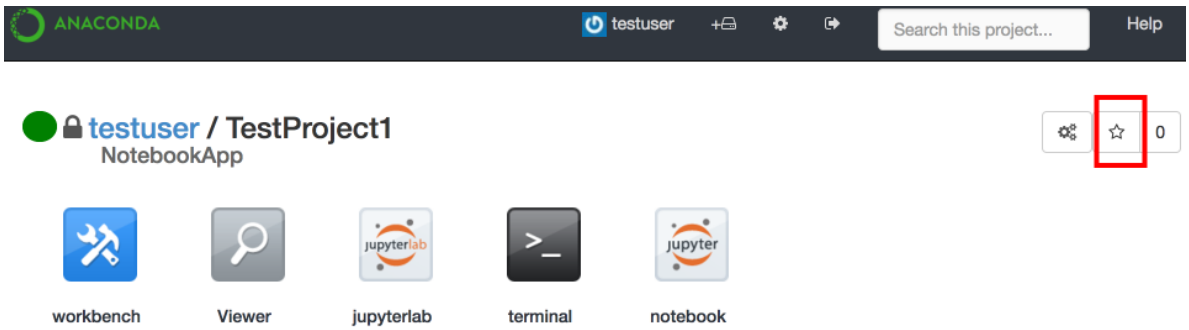
1. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

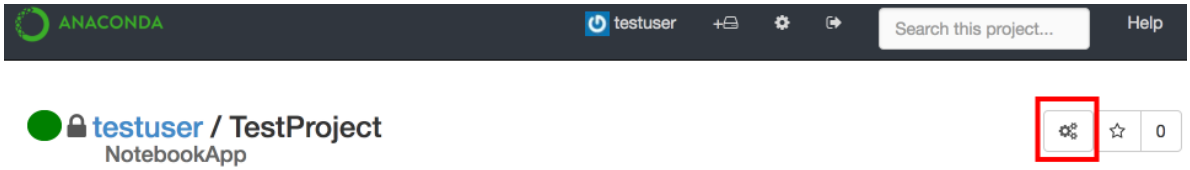


3. To unstar a project, click the Star icon again.

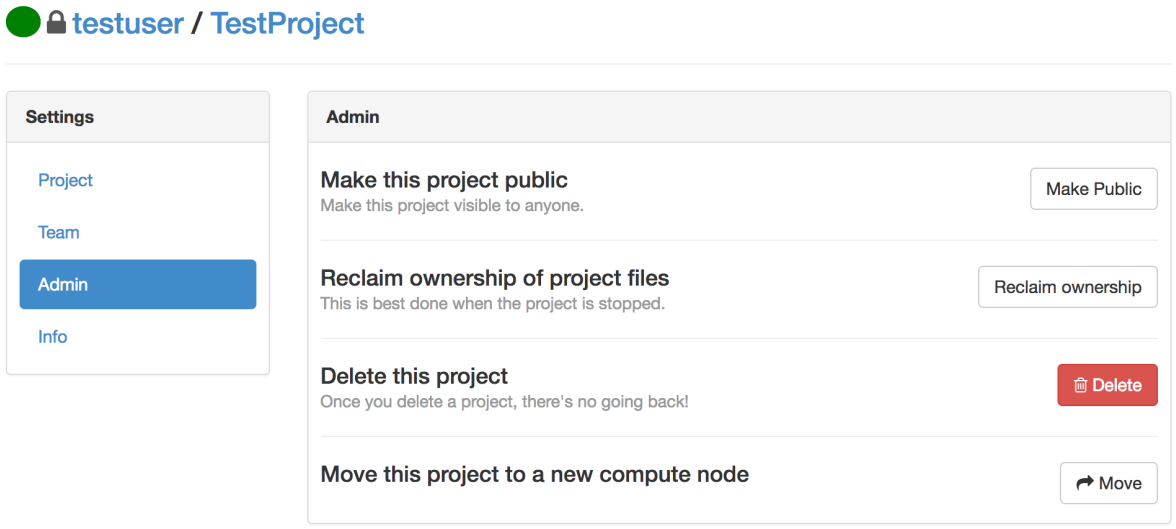
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



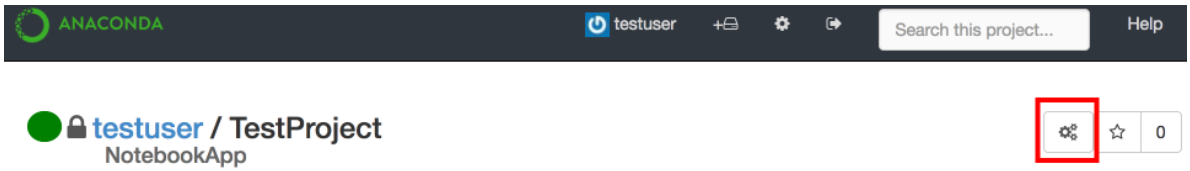
3. In the **Settings** menu, select Admin.



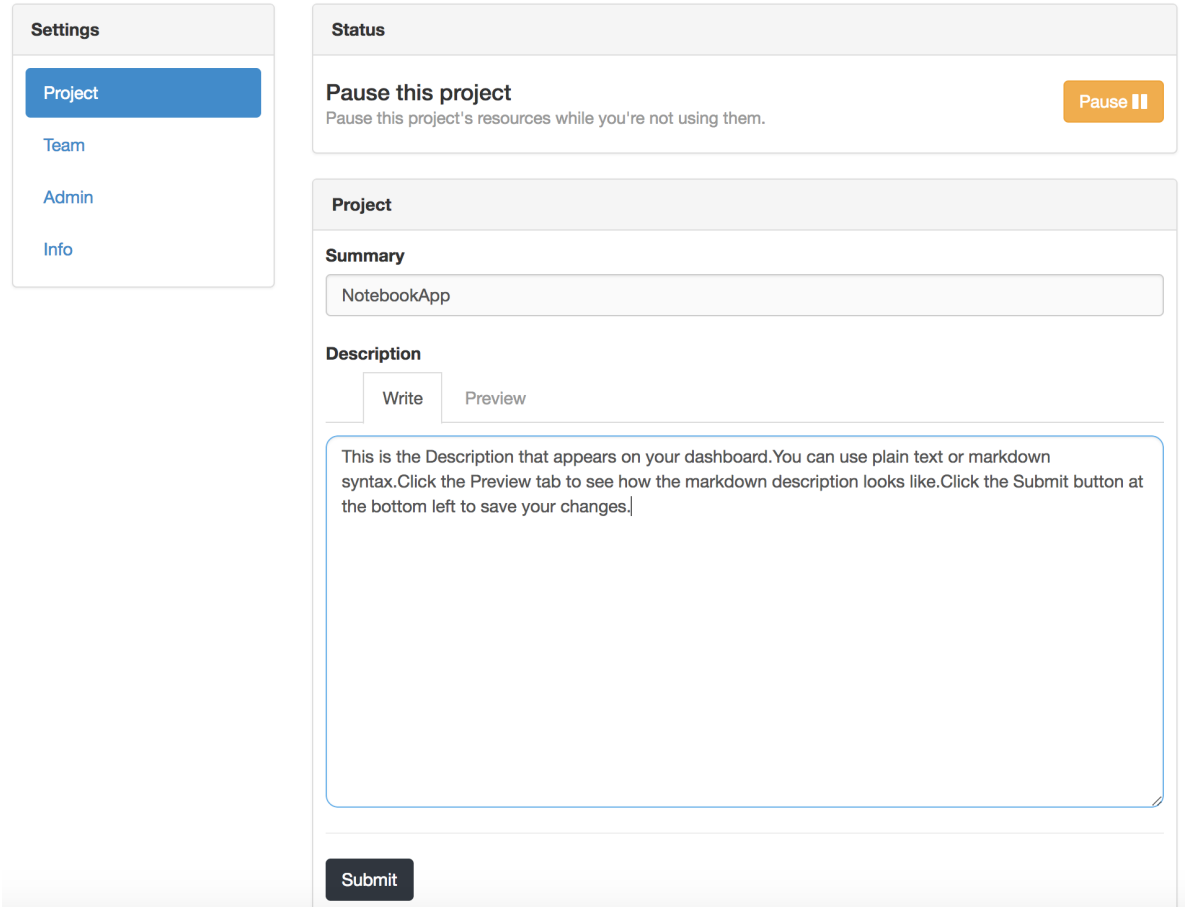
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



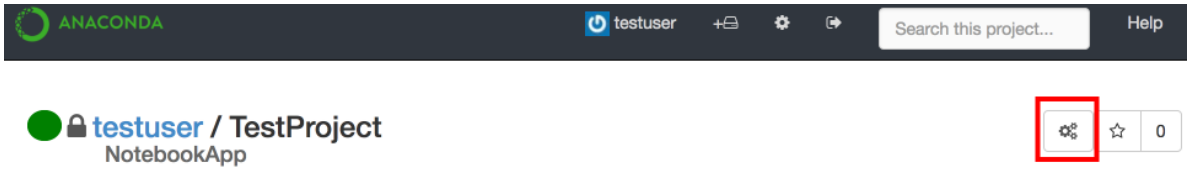
2. In the **Settings** menu, select Project.



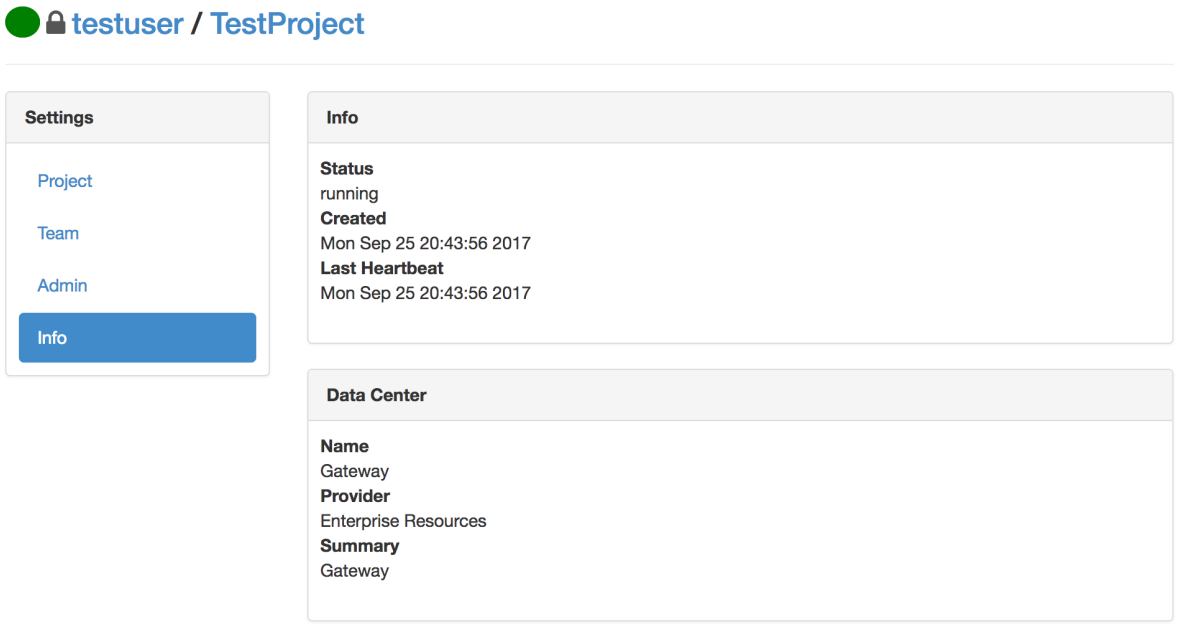
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

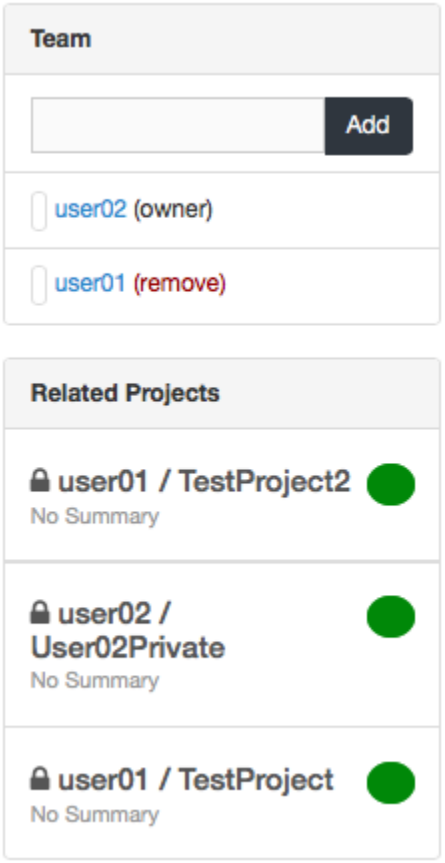


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

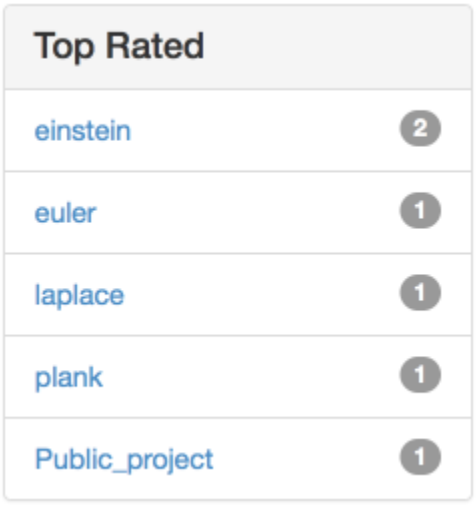
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

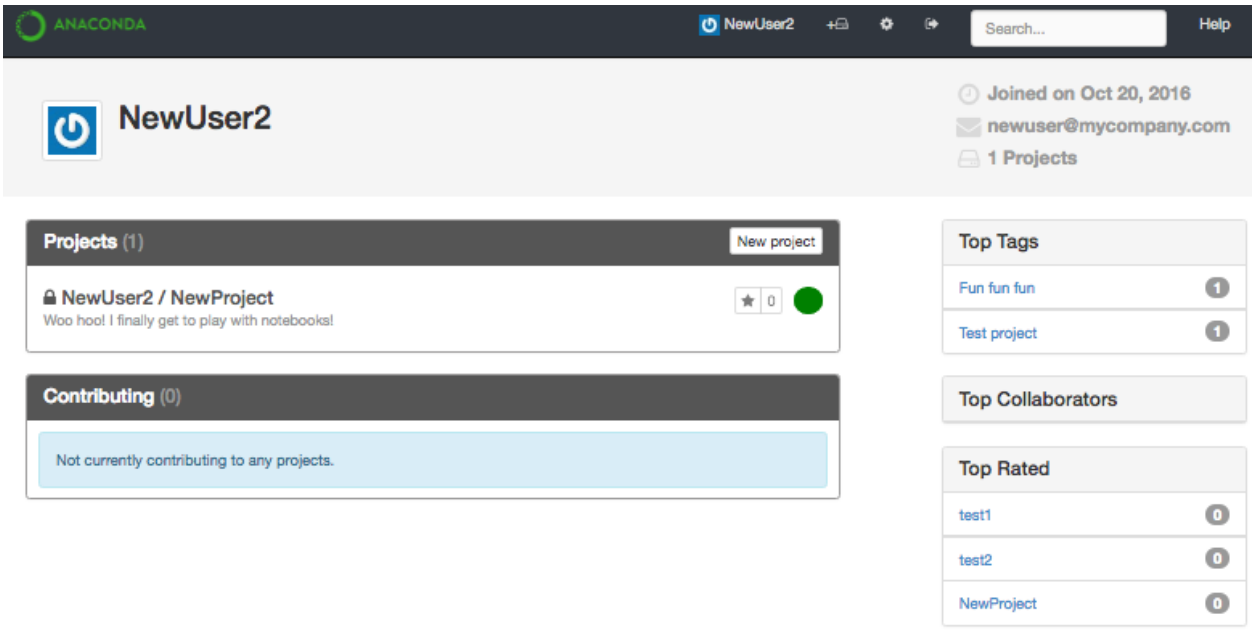


The number next to a project represents the number of stars that have been given to that project.

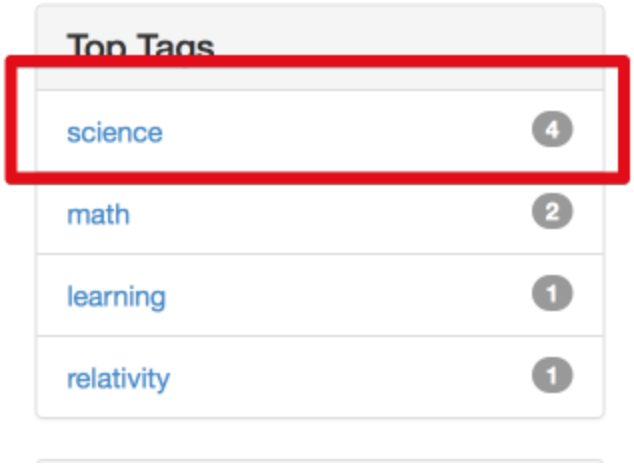
Click a project name to view the project's home page.

Using tags to find a project

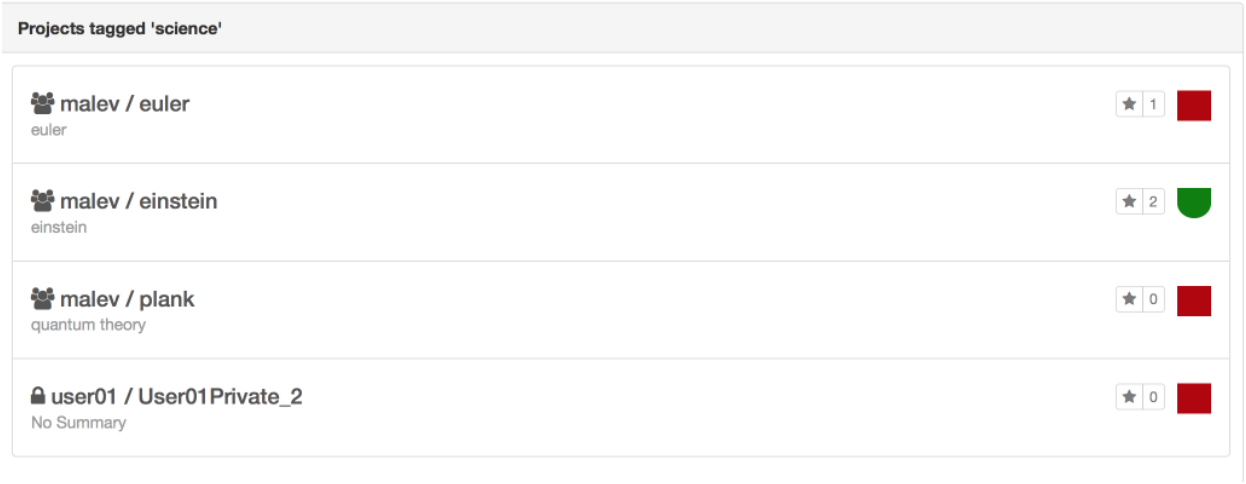
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

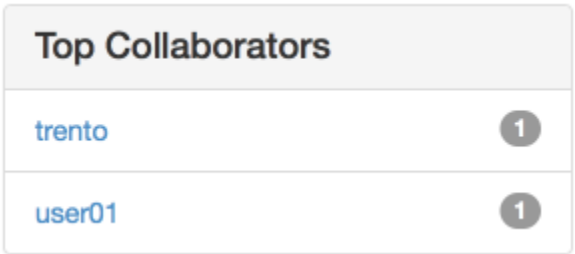


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

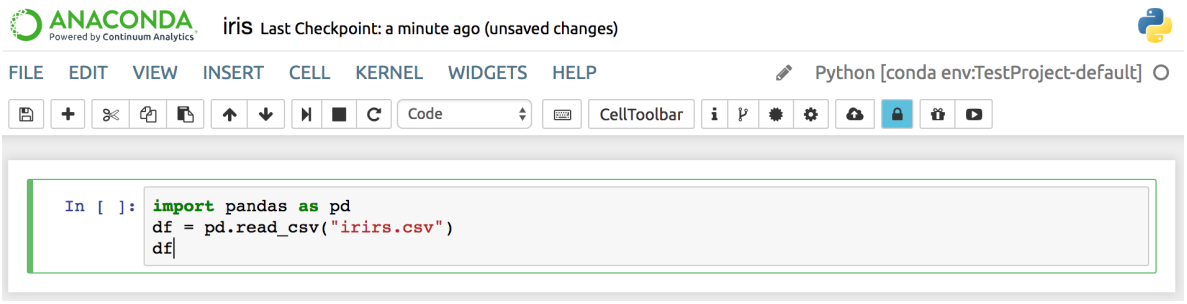
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

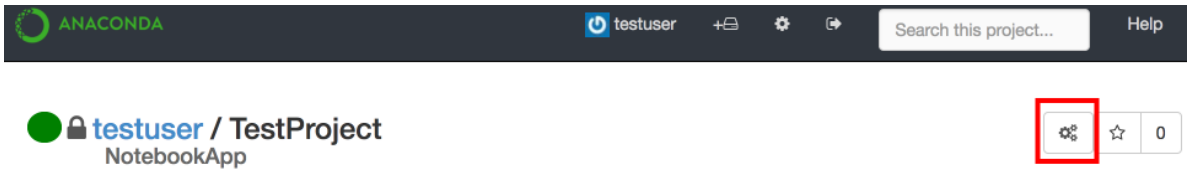
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

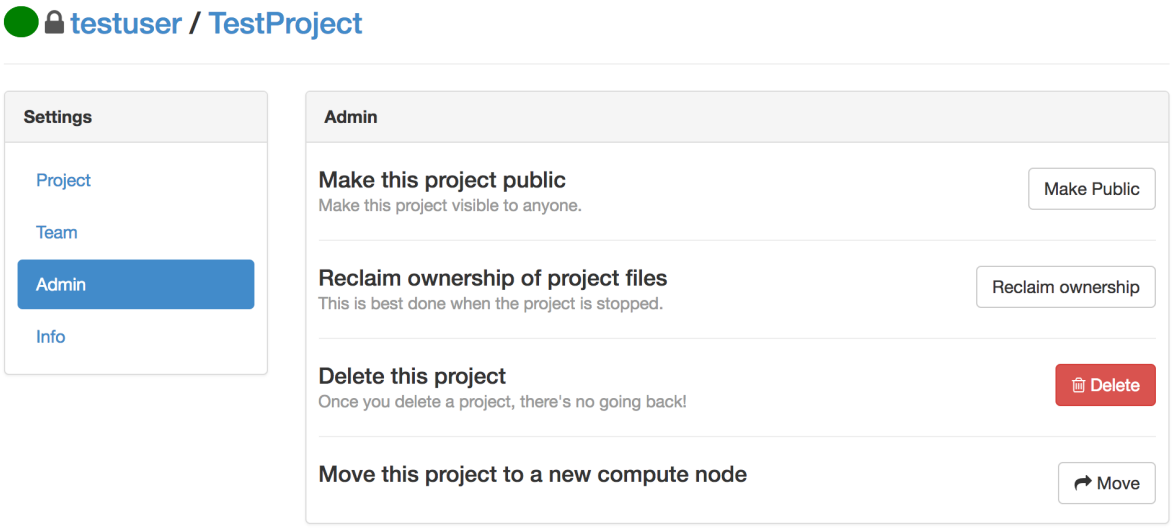
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



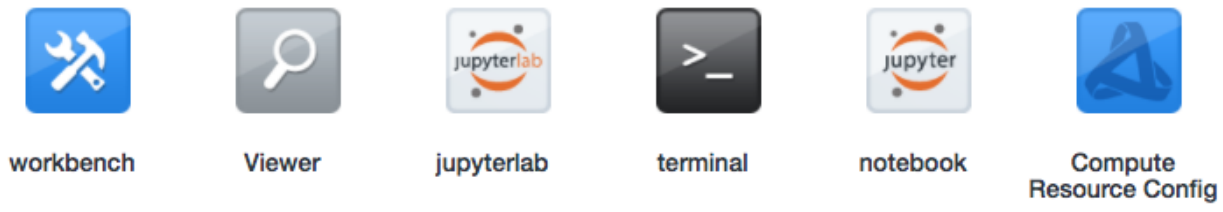
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Using Workbench

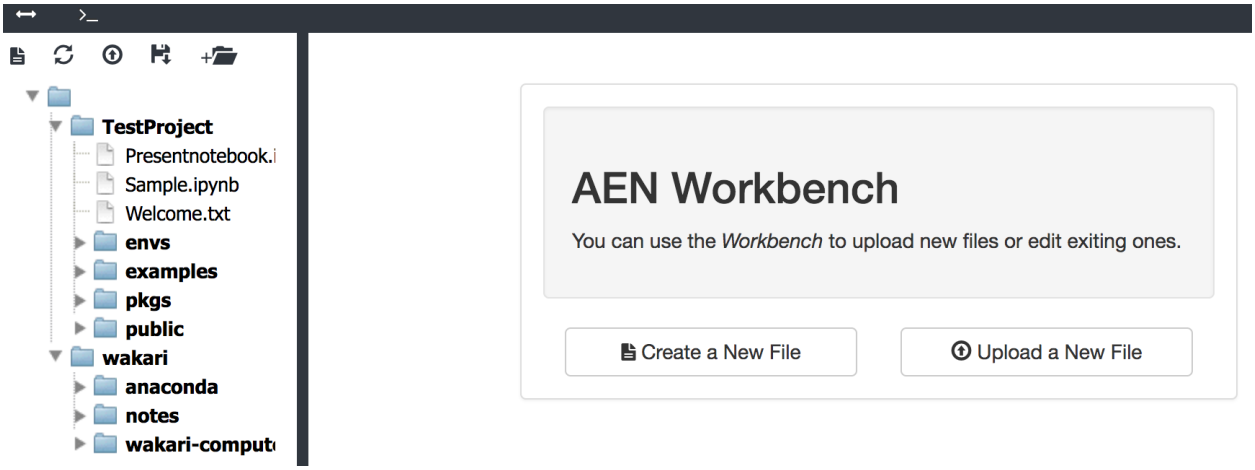
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.
- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

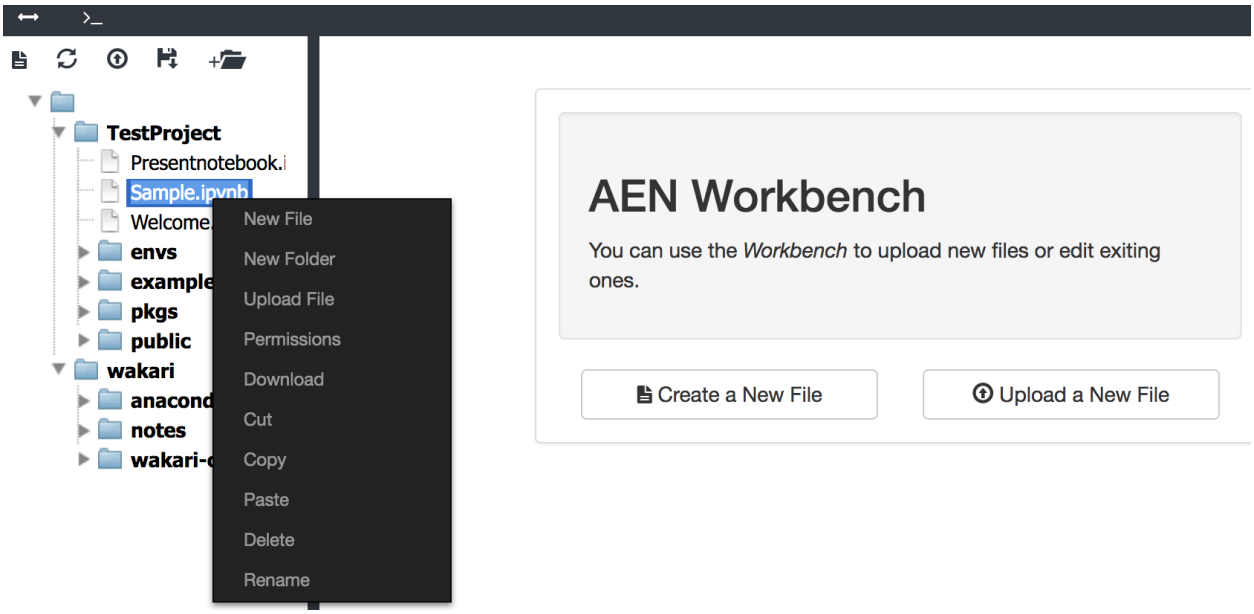
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

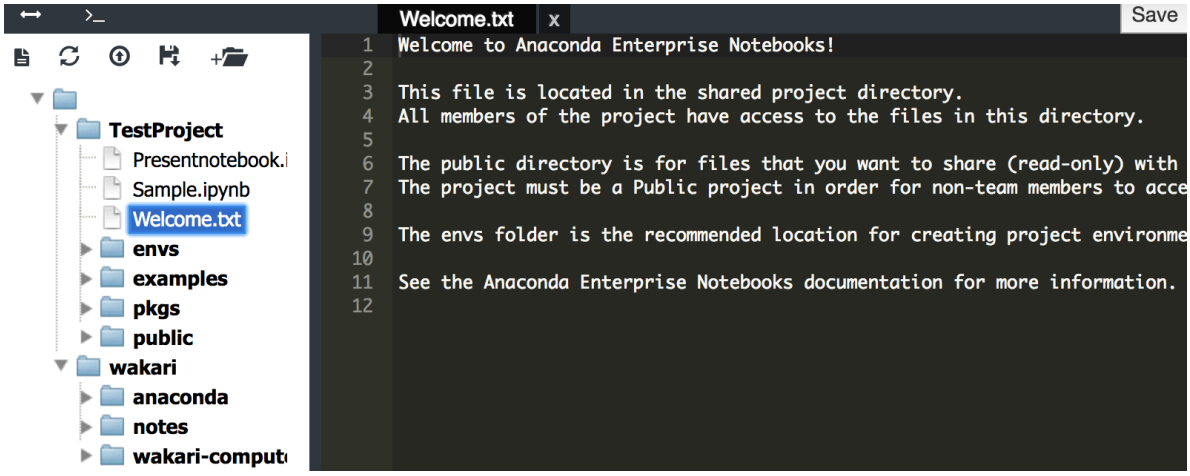
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

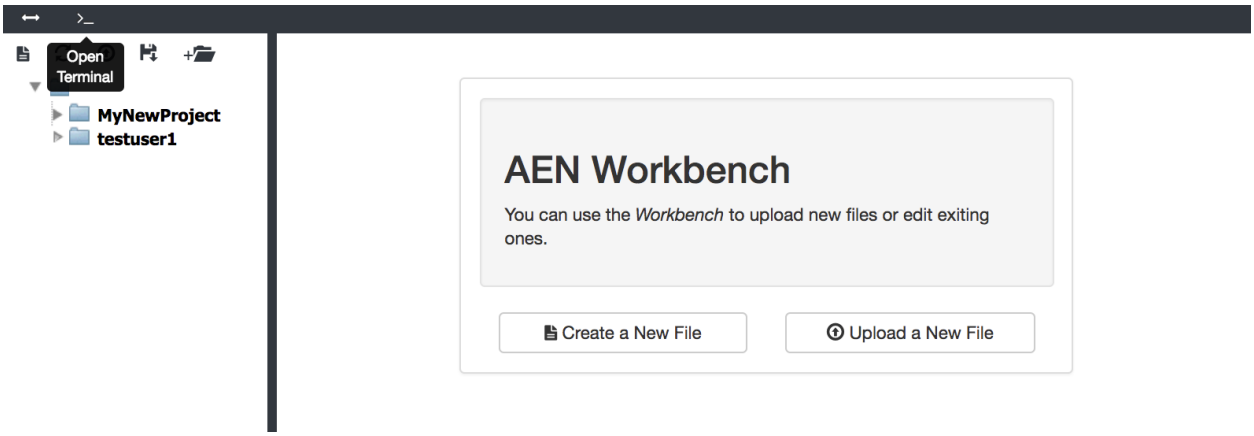


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

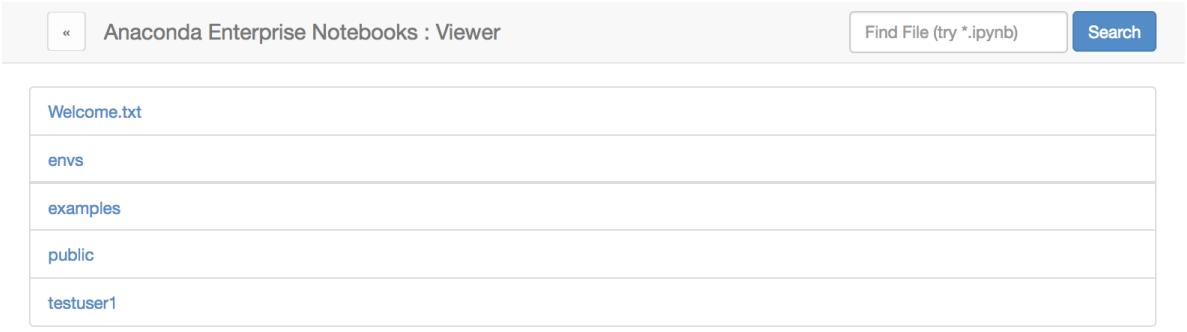
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

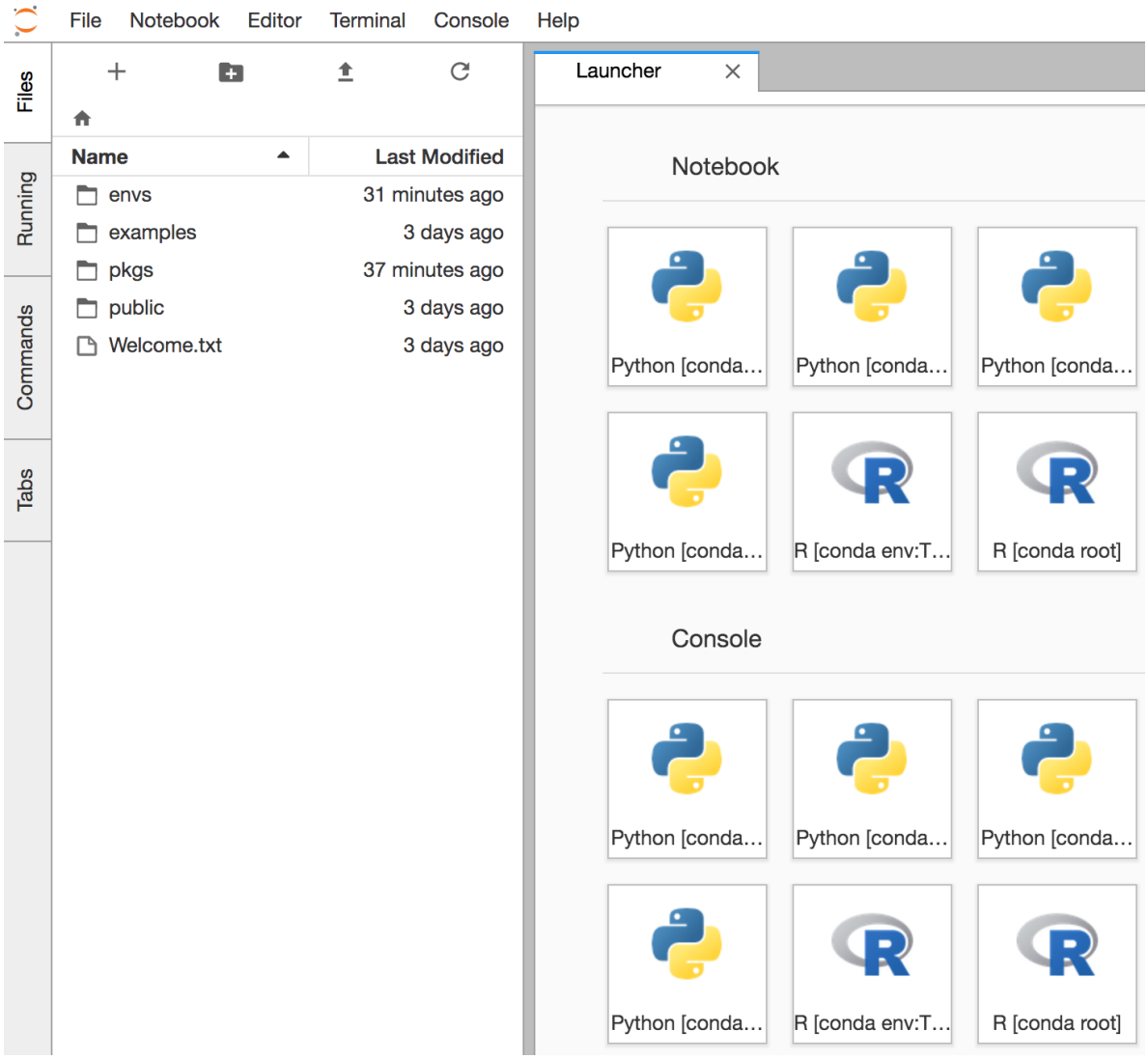
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:



Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:

```
+ 1                                                                    bash
(/projects/aen_admin/TestProject/envs/default) ls
envs  examples  pkgs  Presentnotebook.ipynb  public  Sample.ipynb  Welcome
(/projects/aen_admin/TestProject/envs/default)
```

Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

Terminal opens the project directory in a new browser window.

By default, the project directory is `/projects/username/project-name`.

EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

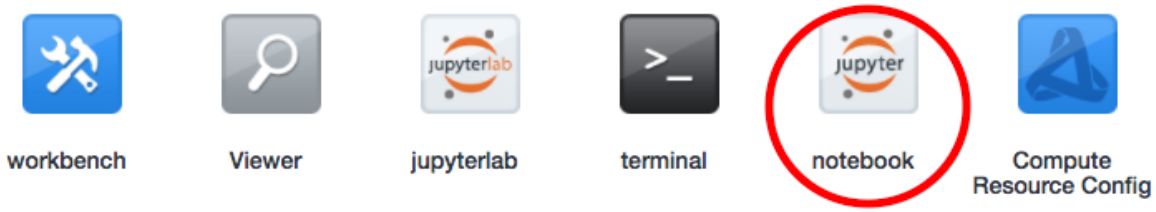
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

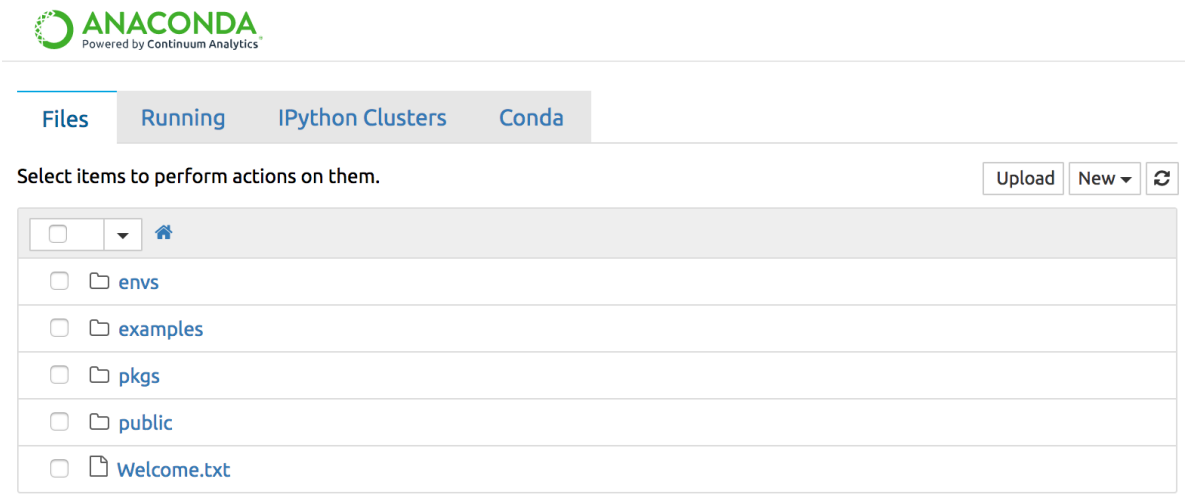
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

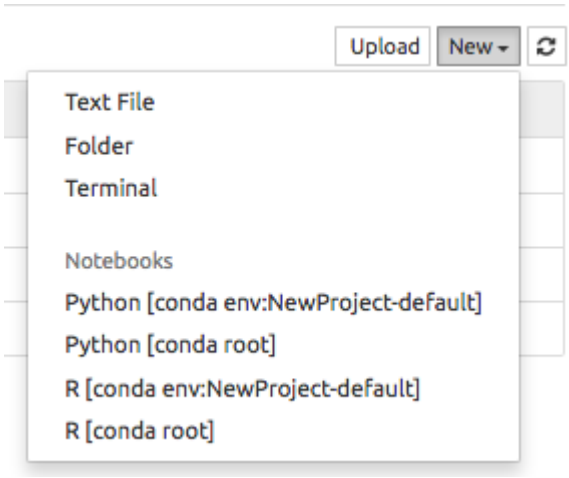
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

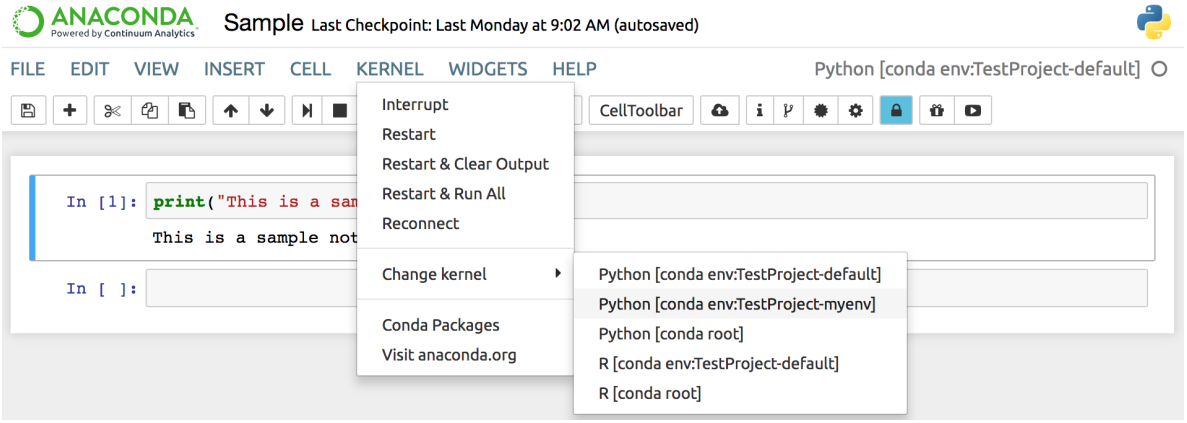
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. To prevent merge conflicts, this model uses a "latest wins" policy as its main merging strategy.

The RCM Jupyter Notebook extension adds four buttons:

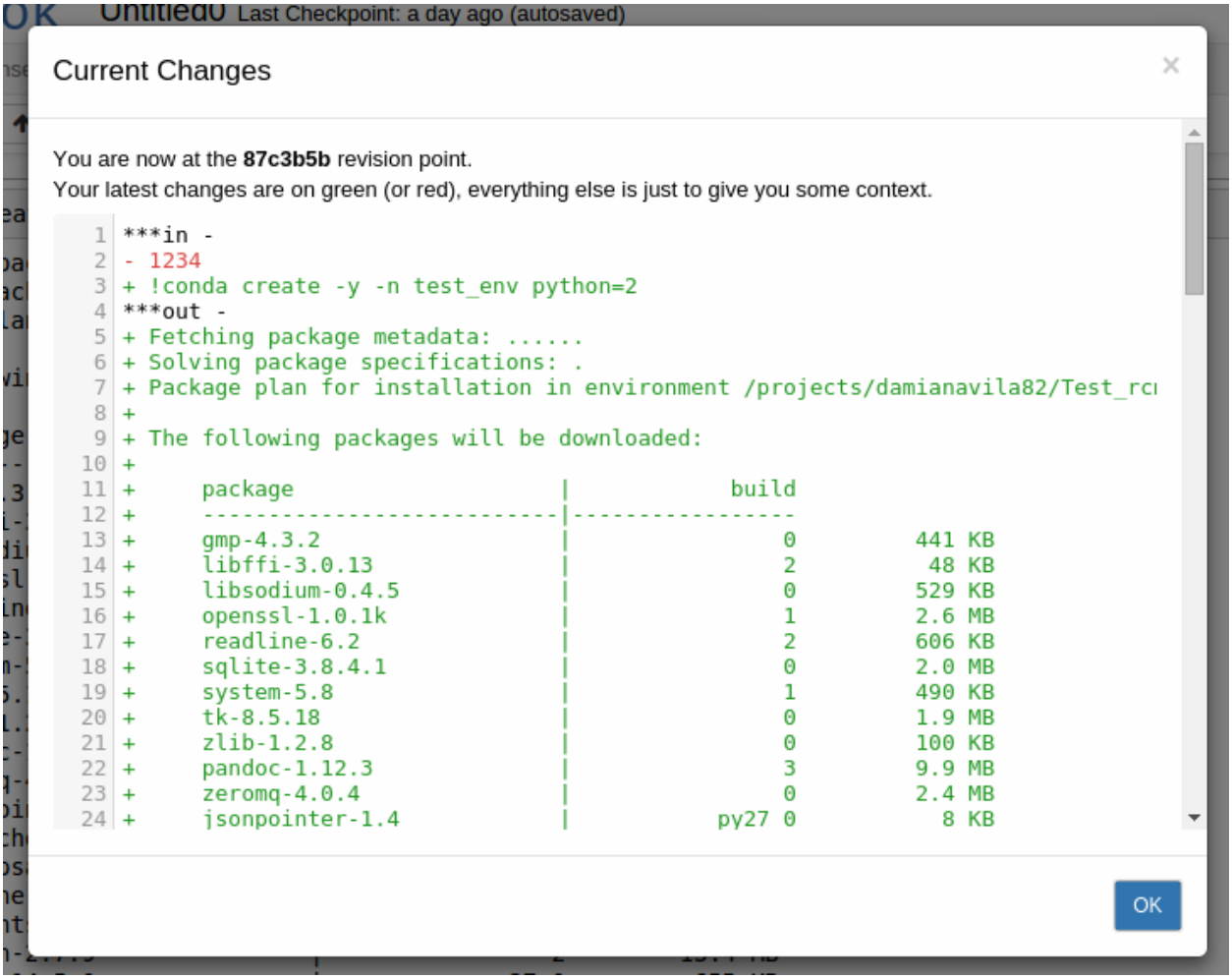
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

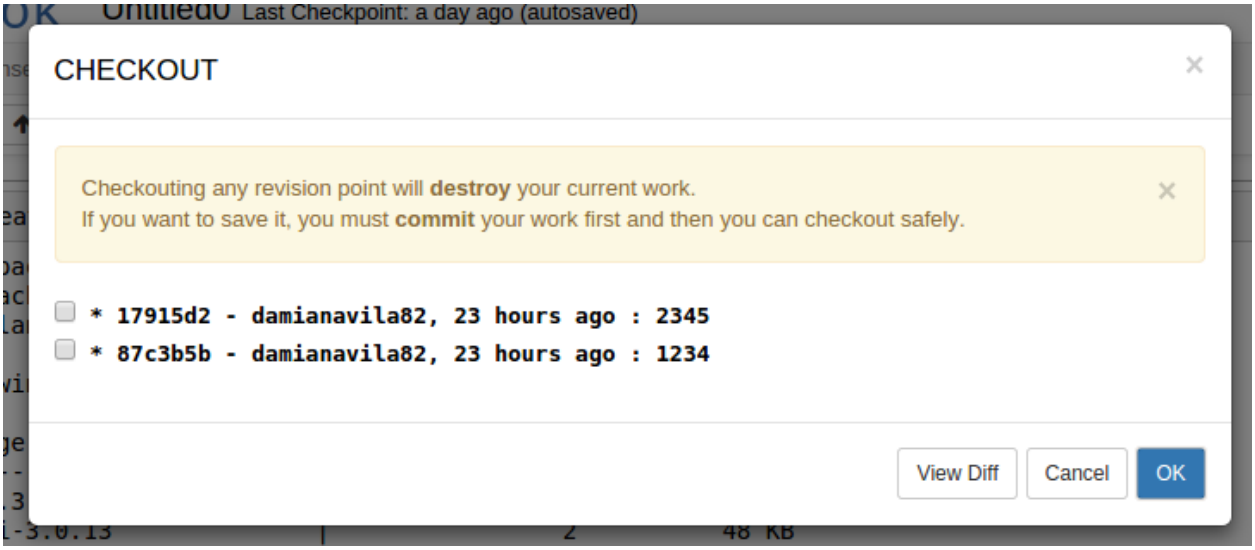
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

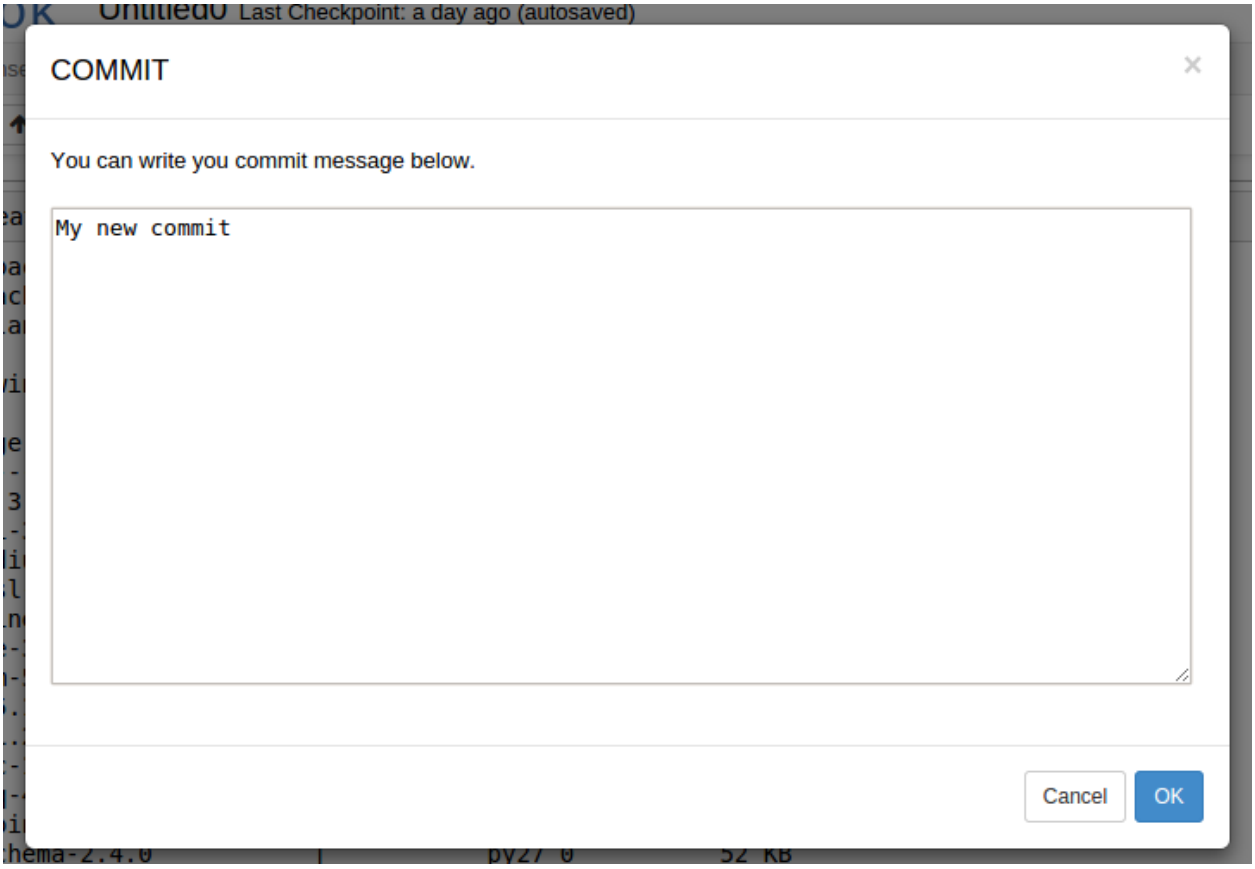
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

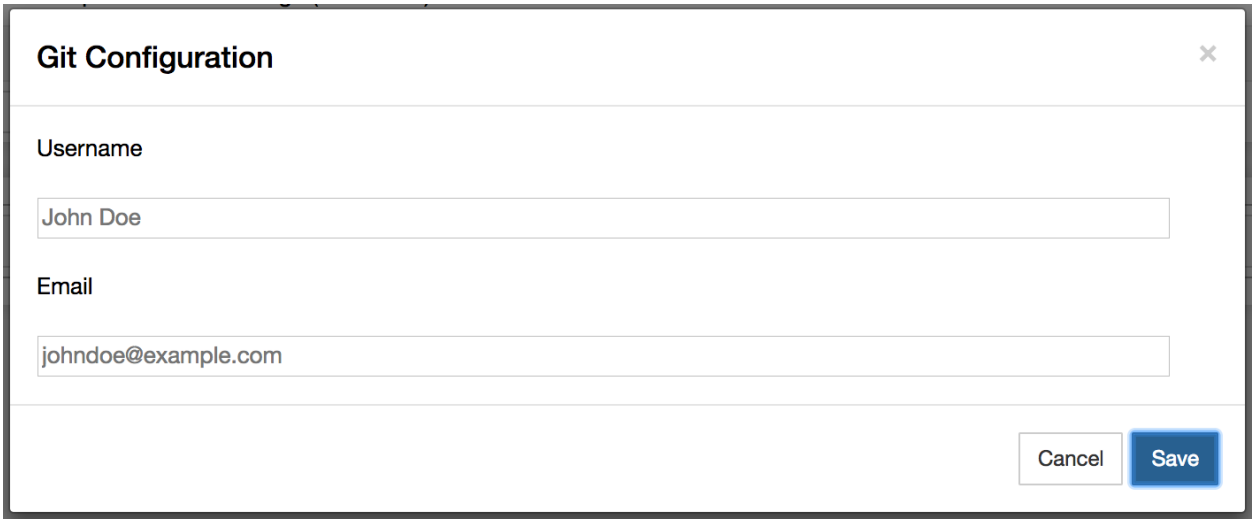
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

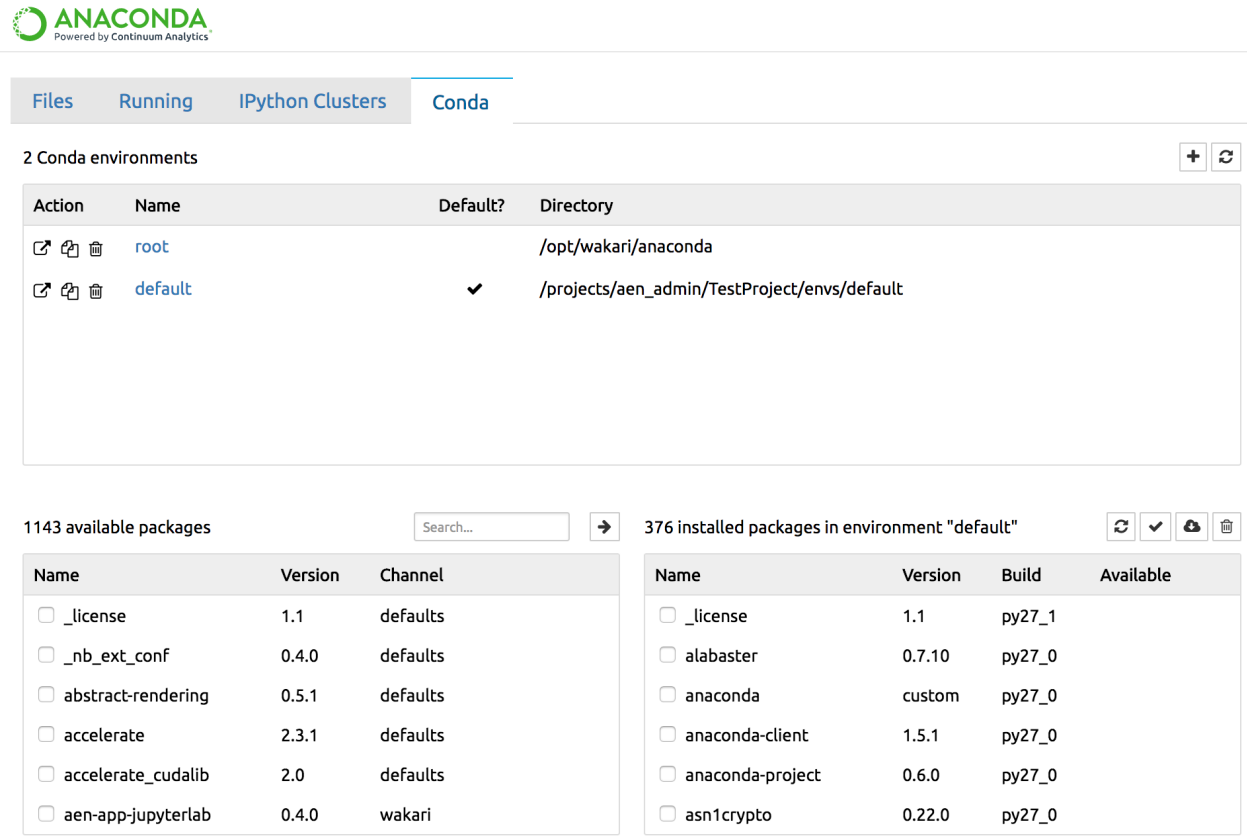
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

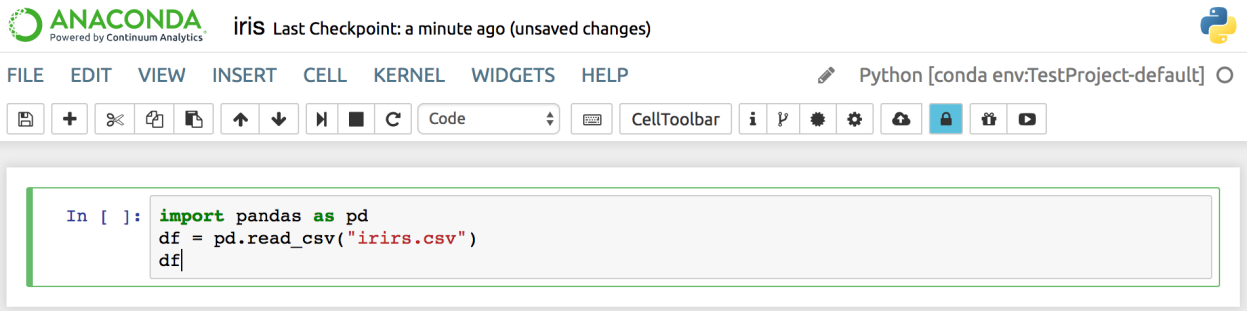
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

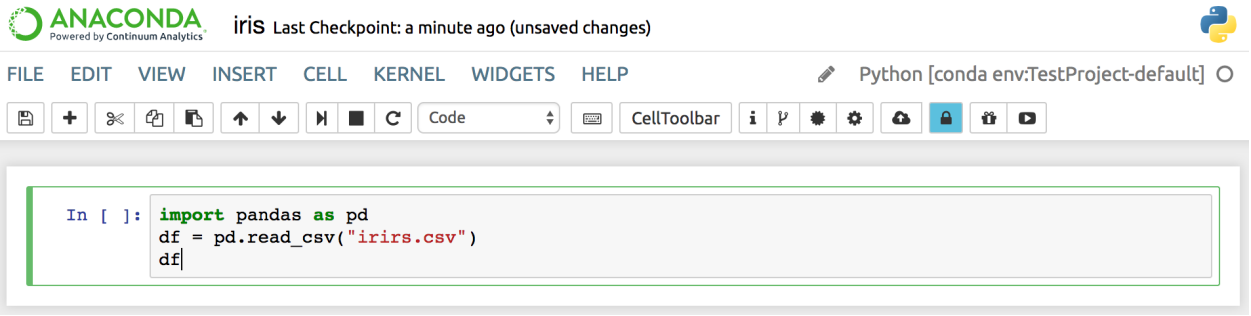
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

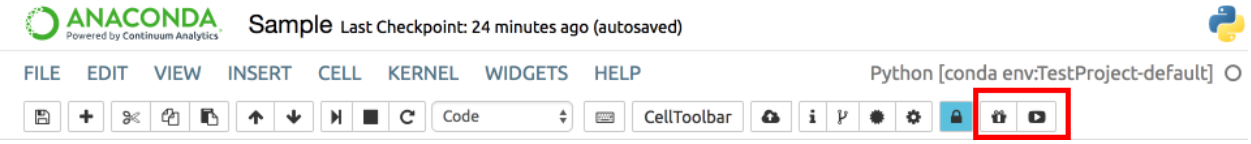
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



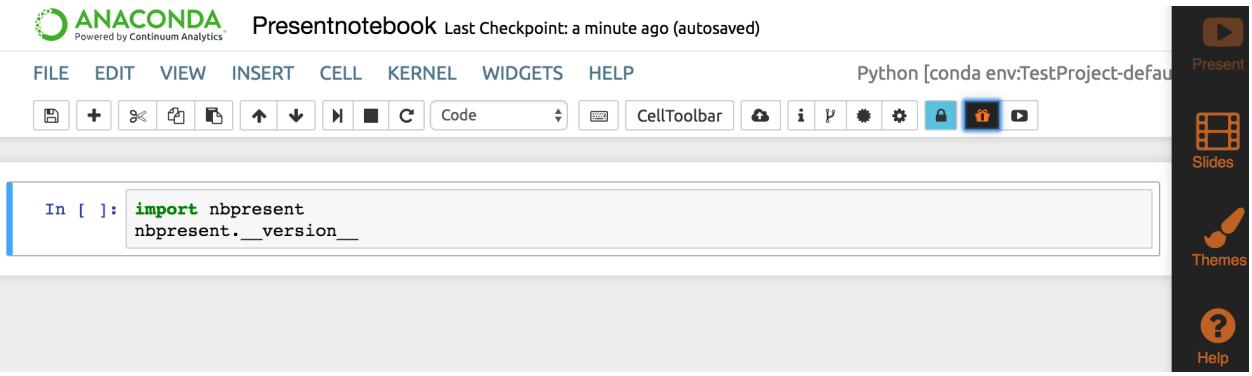
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

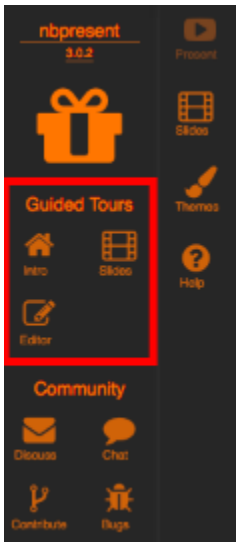


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

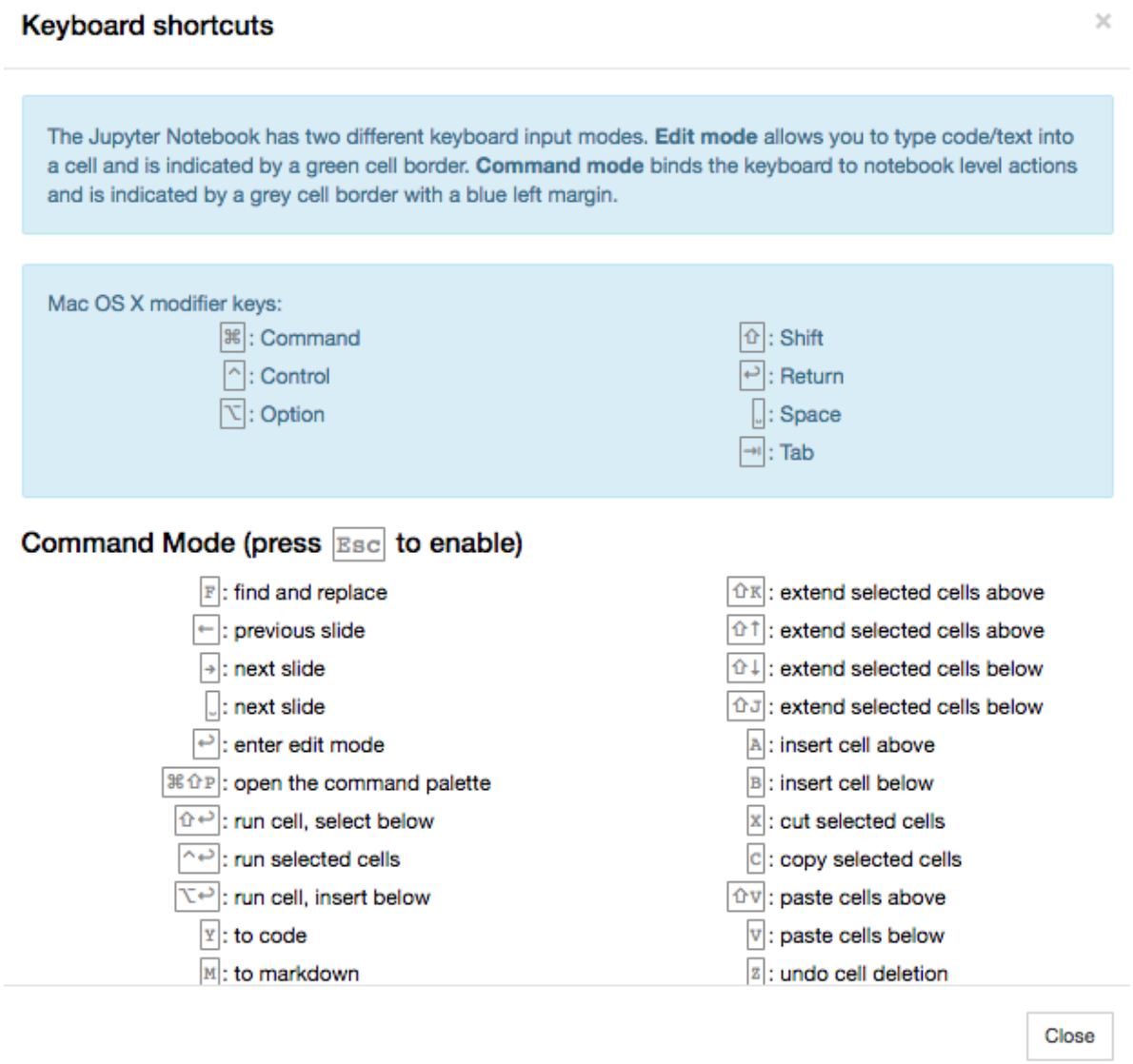
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

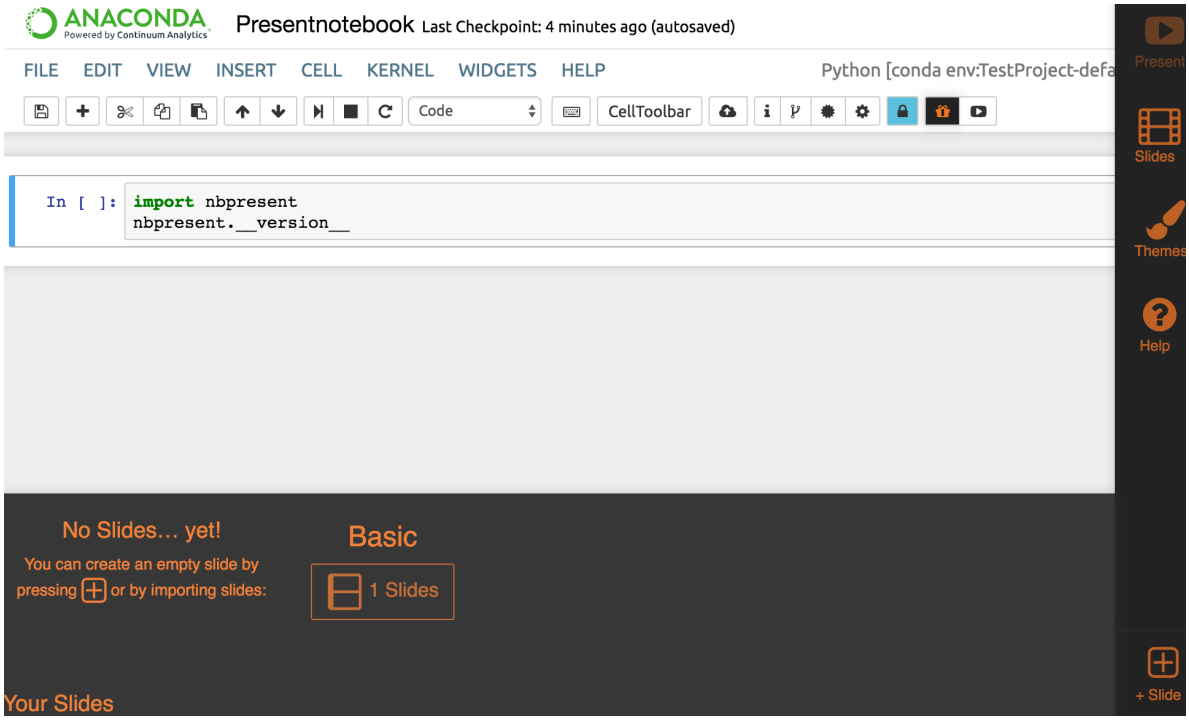
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

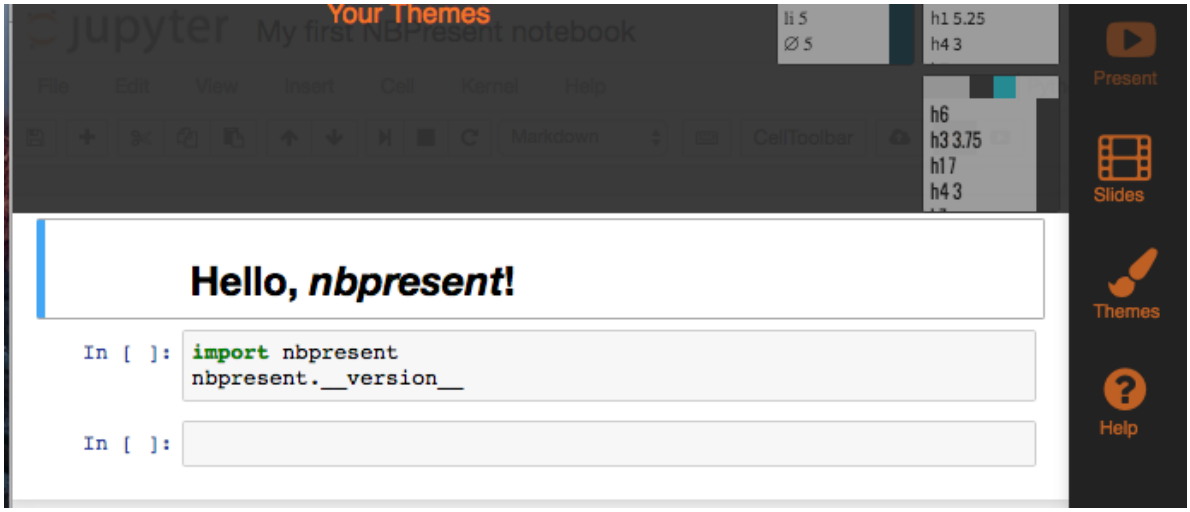
- App Bar—When Authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops Authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any Authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start Presenting, where you can use most Notebook functions with the Theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



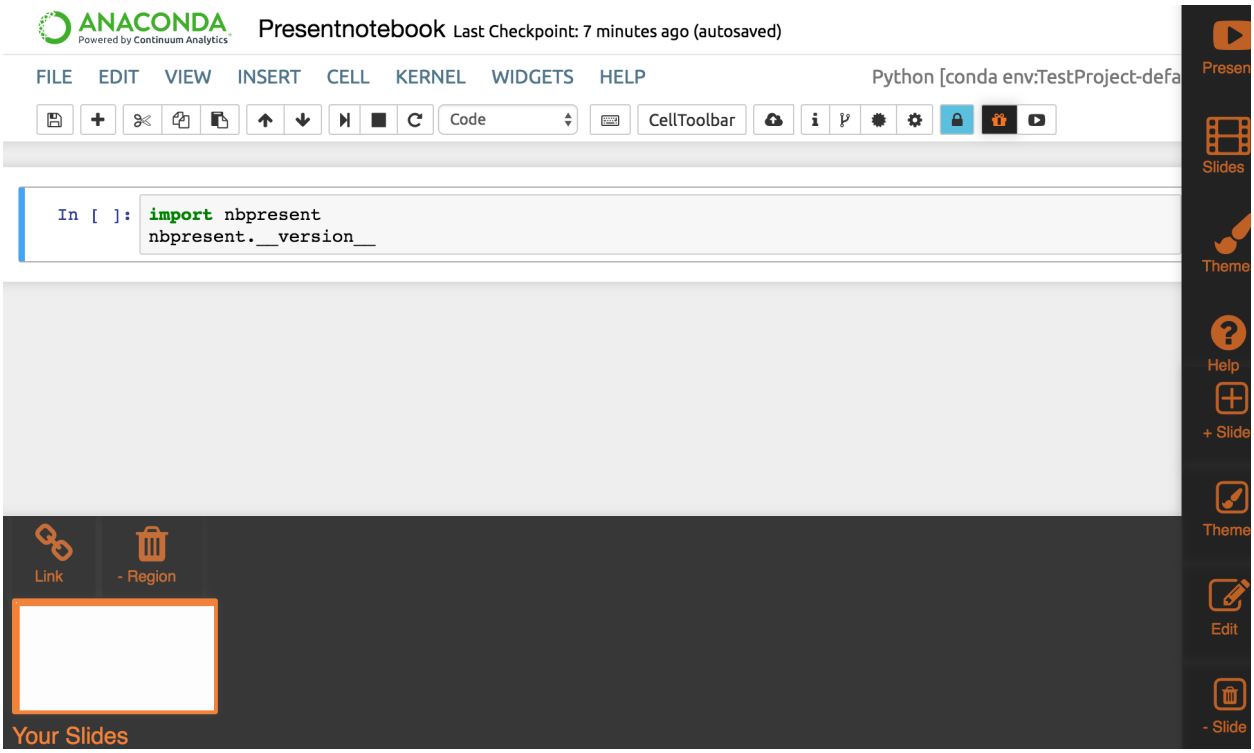
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook .ipynb file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate Help at any time to try other tours, connect with the Present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    - Cell Part: Source (blue)–Source, such as code and Markdown text.
    - Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    - Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    - Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a region and a cell part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

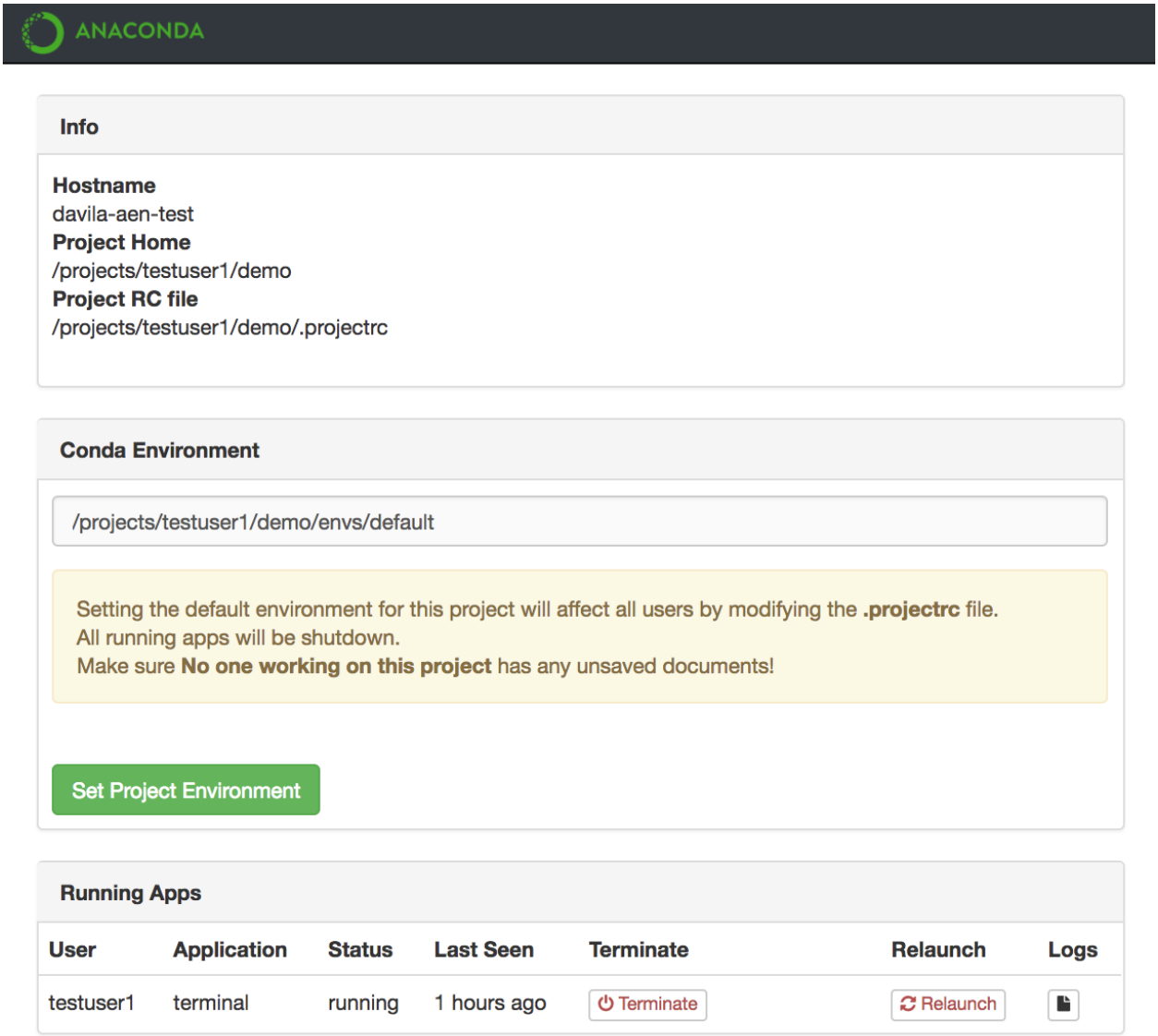
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

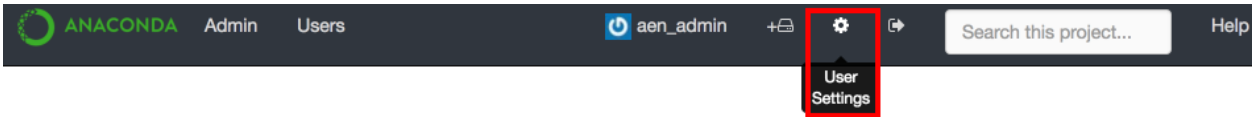
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

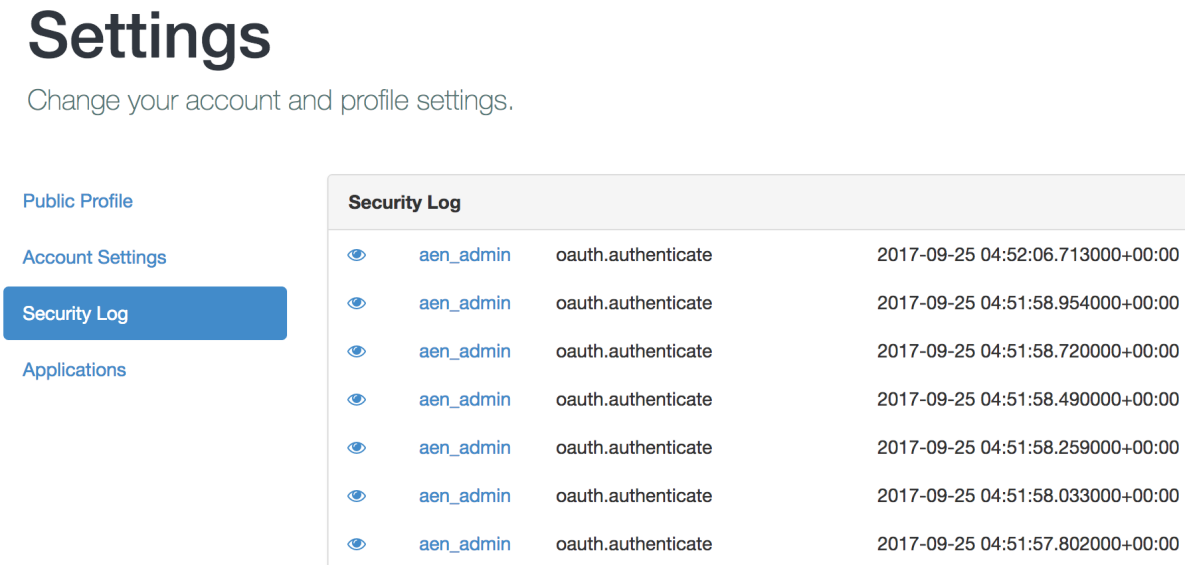
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

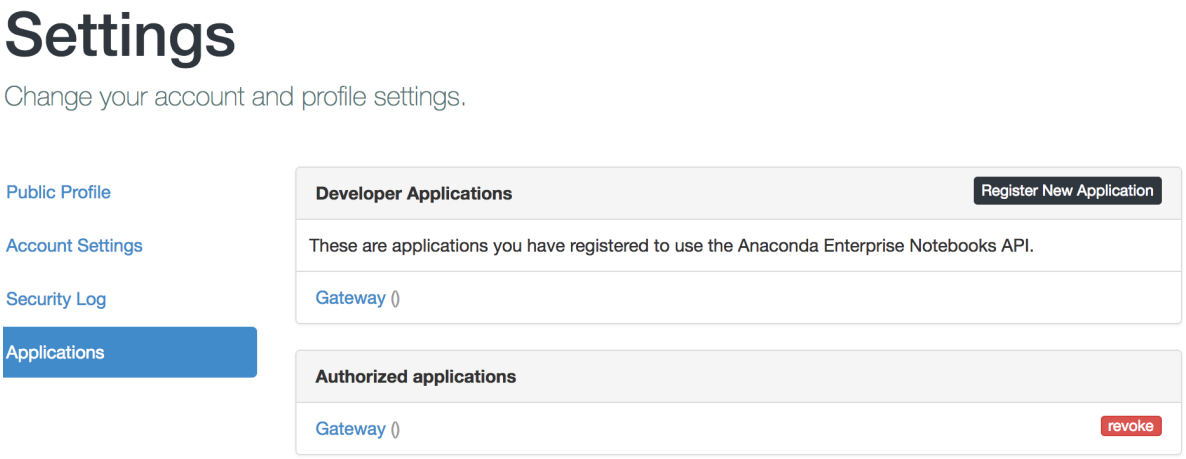


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

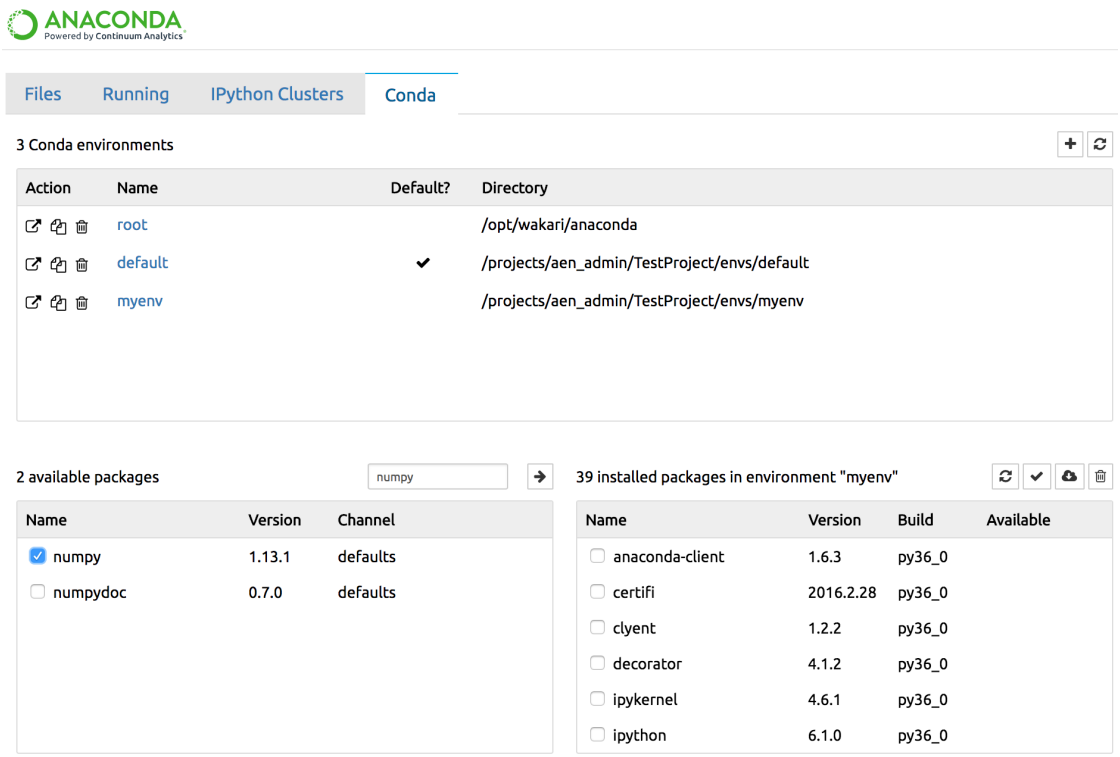
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

   ```
   conda create -n WeatherModel numpy
   ```

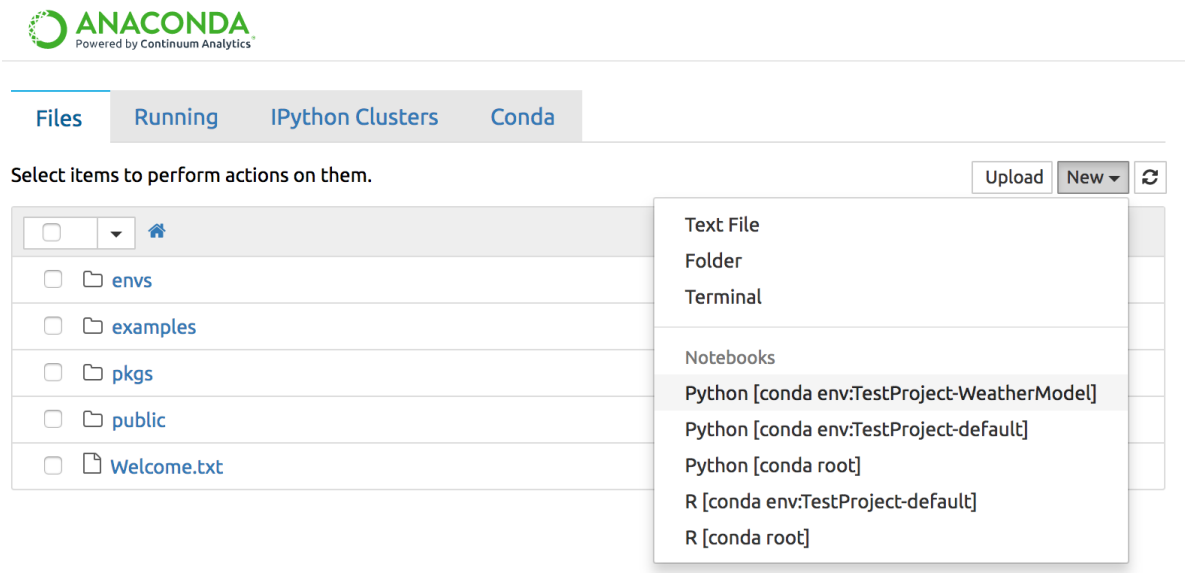
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select Python [conda env:test1-my_env].

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

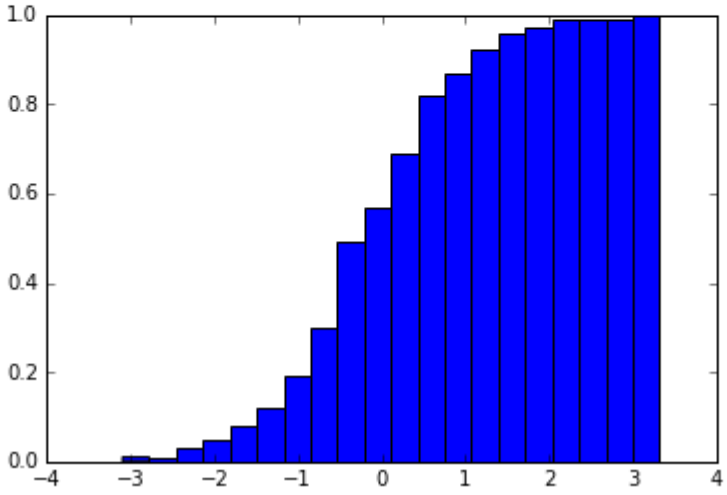
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

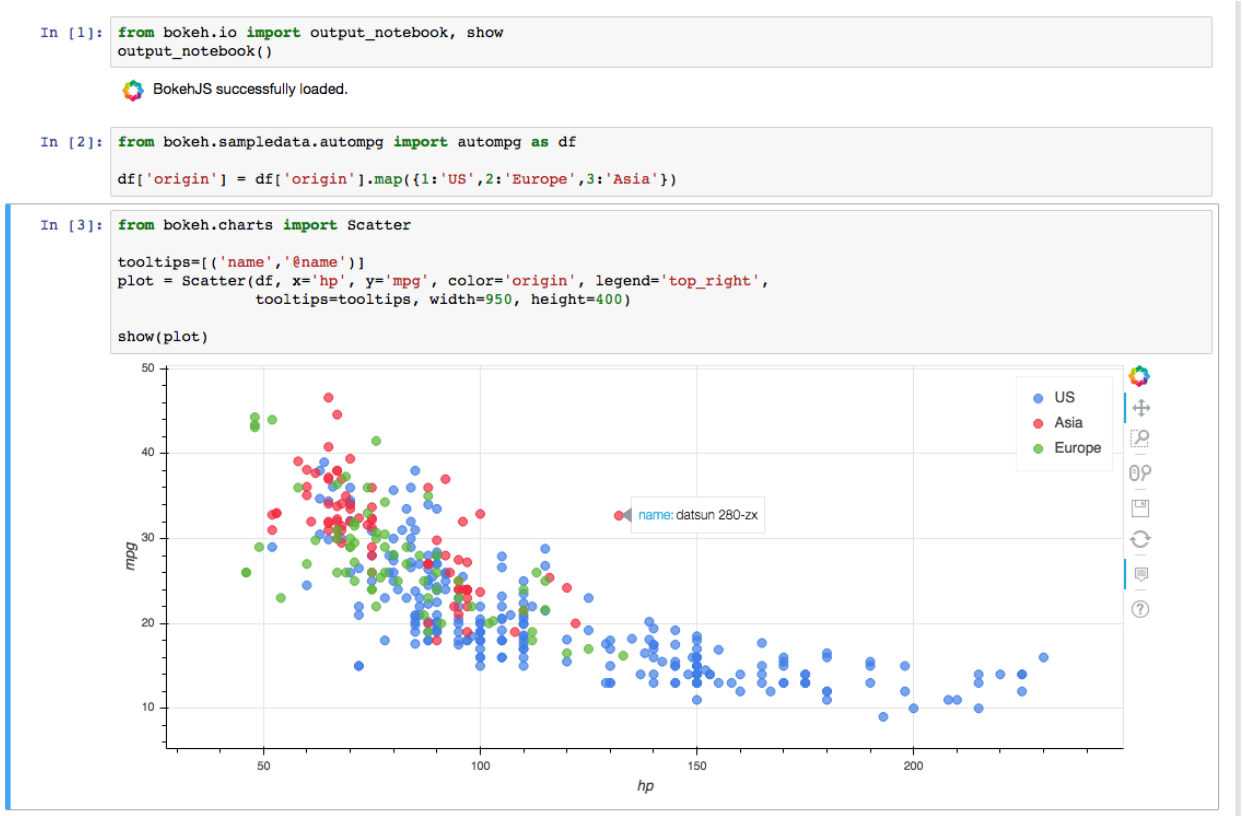
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

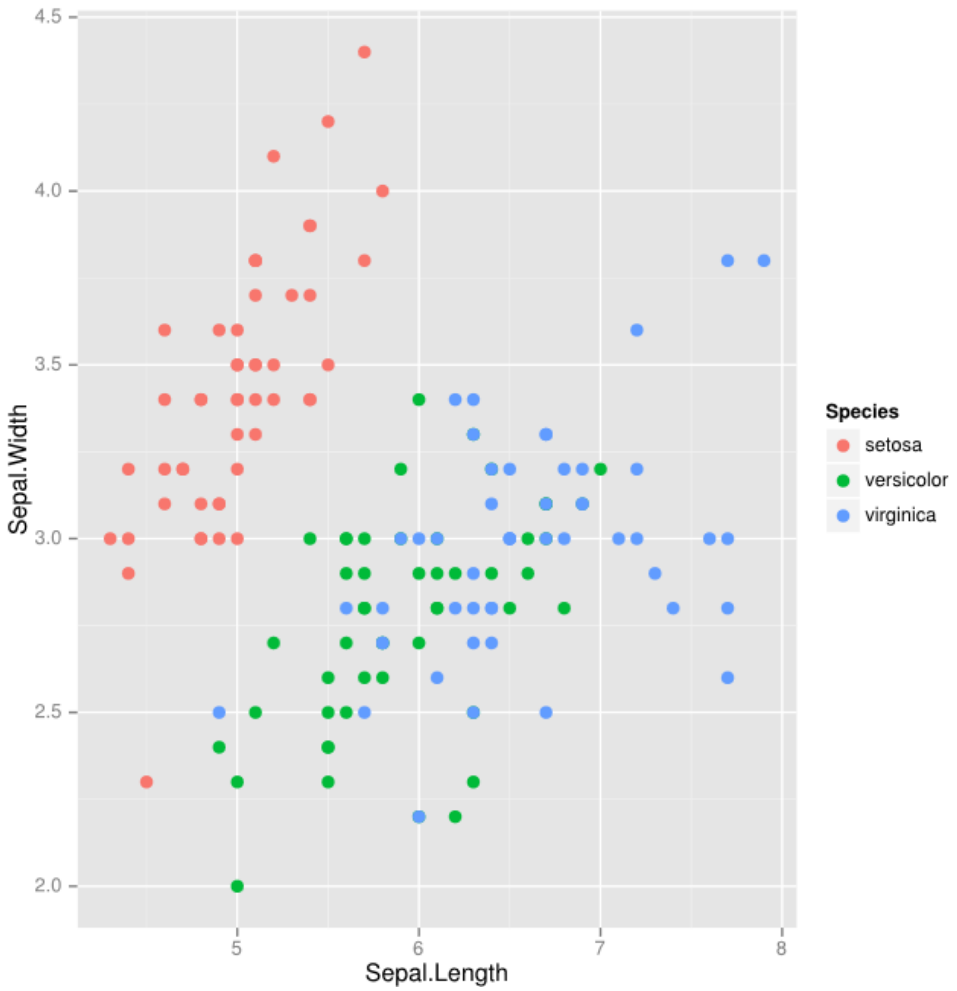
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the $PATH environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

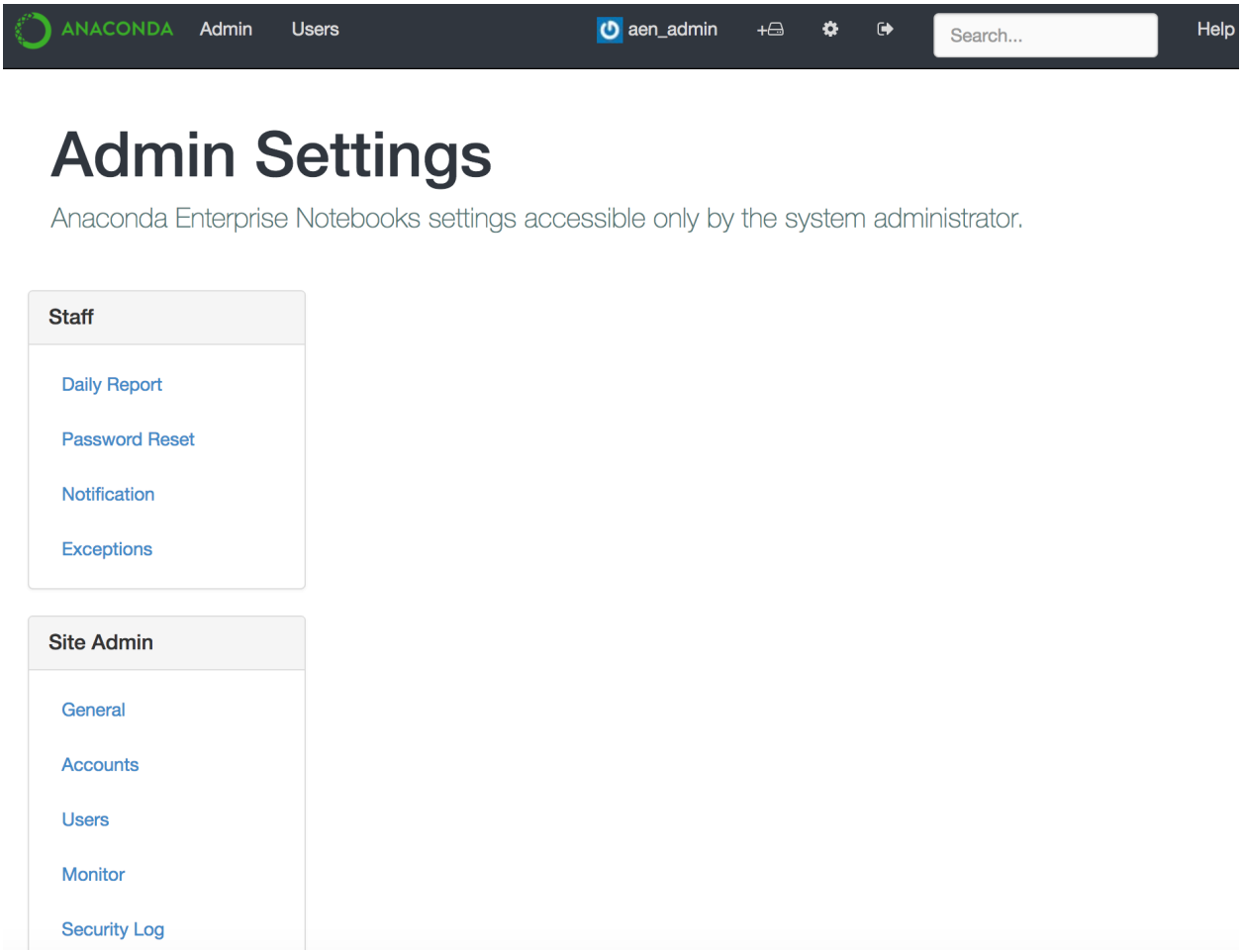
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



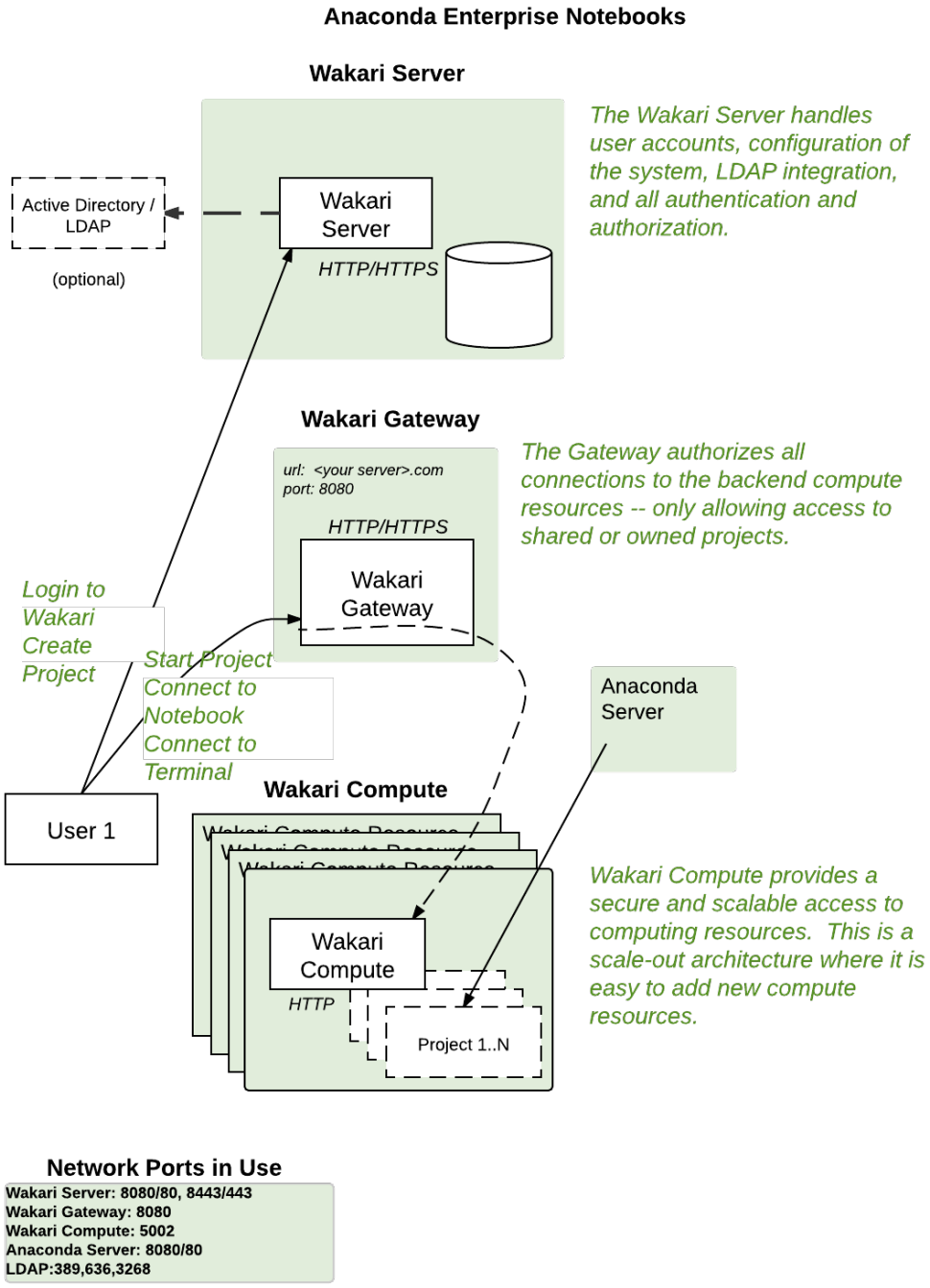
All of the other navigation bar items are the same as for a user account.

Concepts

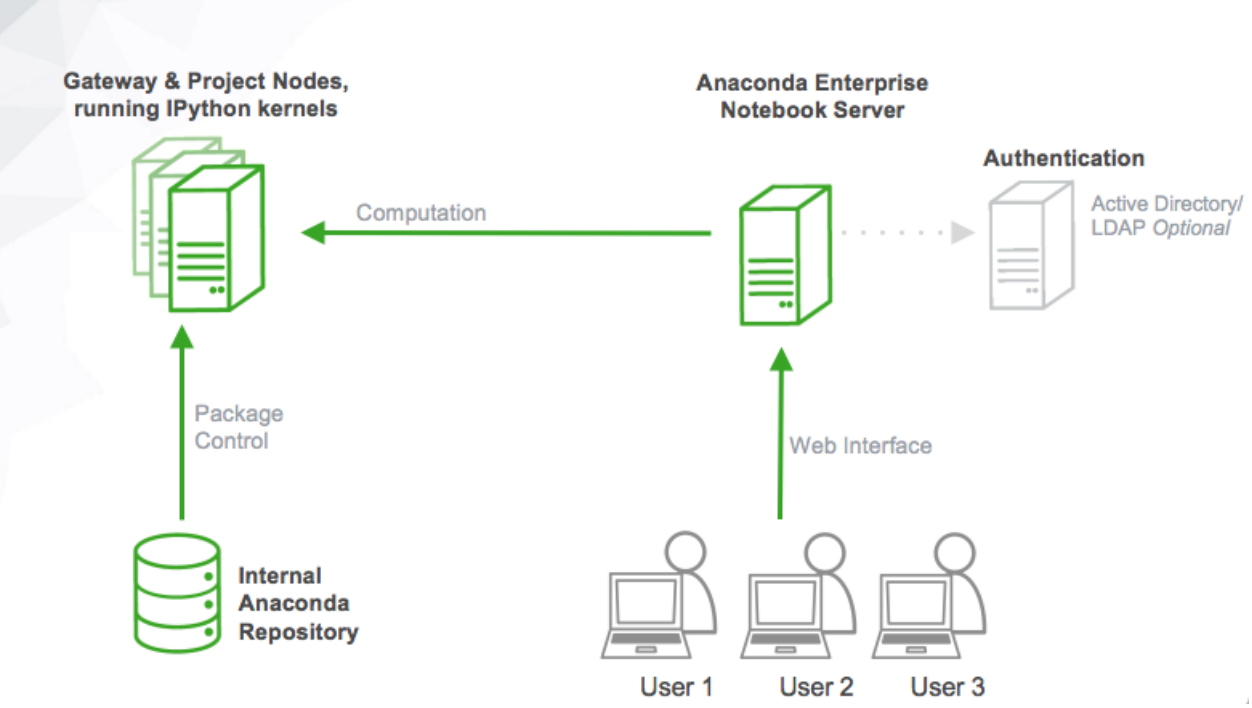
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup, and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for internal data persistency. It is typically run on the same host as the server, but can also be *installed on a separate host*.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web process, which runs on a high-numbered port that only listens on localhost. NGINX is also responsible for static content.

AEN server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service, and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app, or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

`wk-compute` loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually `wakari` or `aen_admin`.

The Supervisor daemon process is called `supervisord`. It runs in the background, and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should be used for administrative tasks only, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name `default` into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

We recommend you use a new conda environment to test a new version of a package, before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, `wakari` or `aen_admin`.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Equal to or higher than version 2.6.8 and lower than version 3.0.
  - NGINX—Equal to or higher than version 1.6.2.
  - Elasticsearch—Equal to or higher than version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.3.2-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.3.2-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.3.2-Linux-x86_64.sh
```

NOTE: The current $RPM_CDN server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use *curl* or *wget* to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as <AEN_SERVER_IP> or <AEN_SERVER_FQDN>, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the AEN_SUDO_CMD environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an AEN_SUDO_CMD entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the *bzip2* package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.6.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.10.2-1.el7.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.3.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

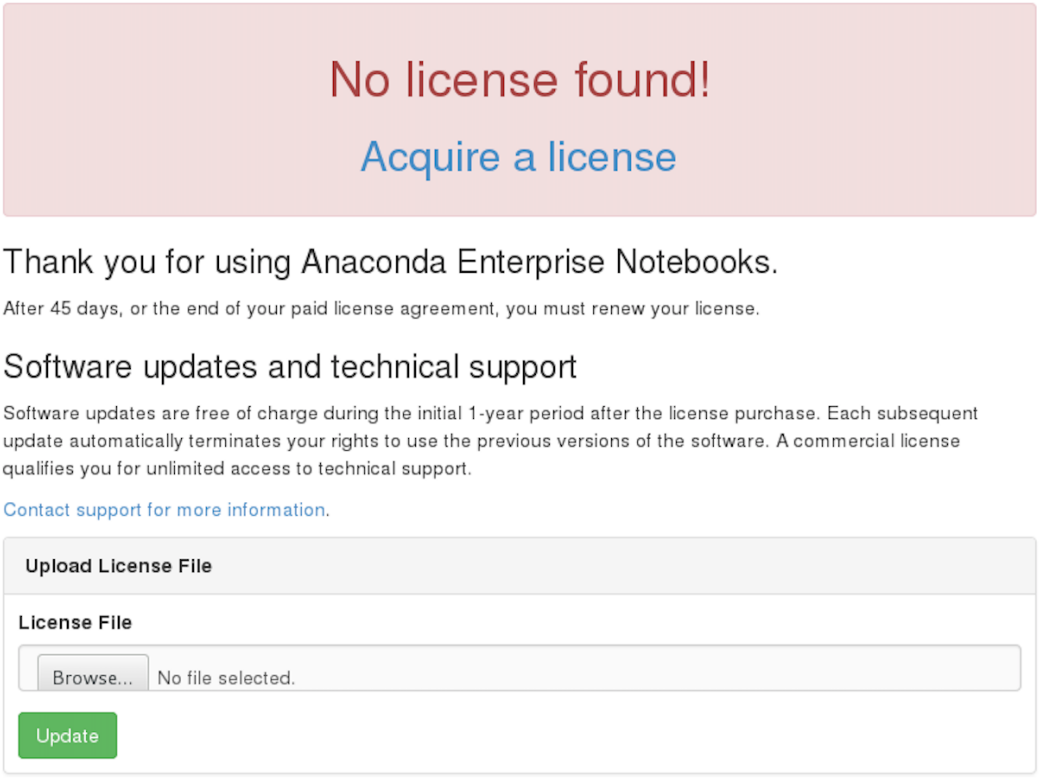
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

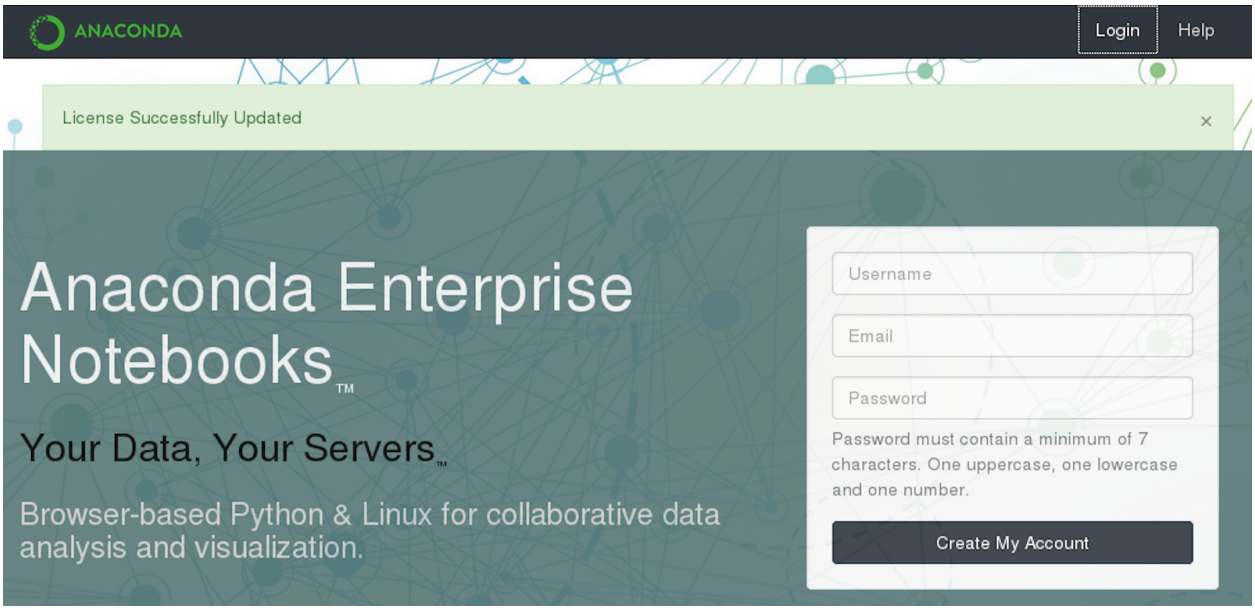
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

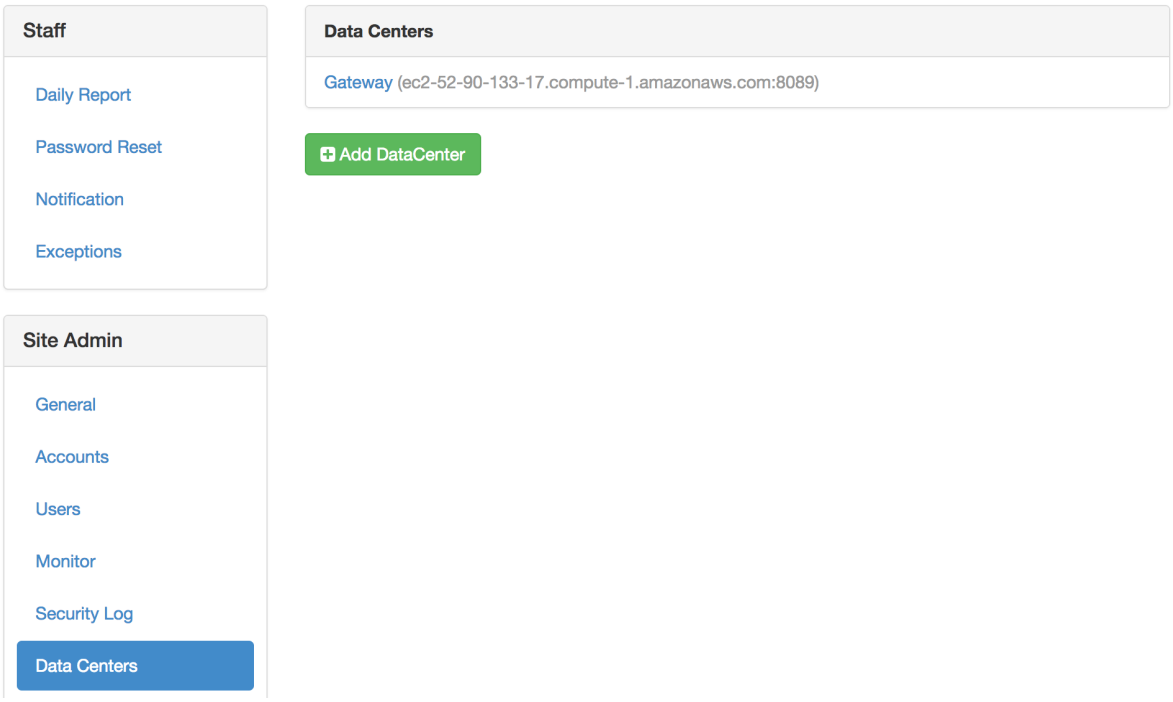
Starting the gateway

Run:

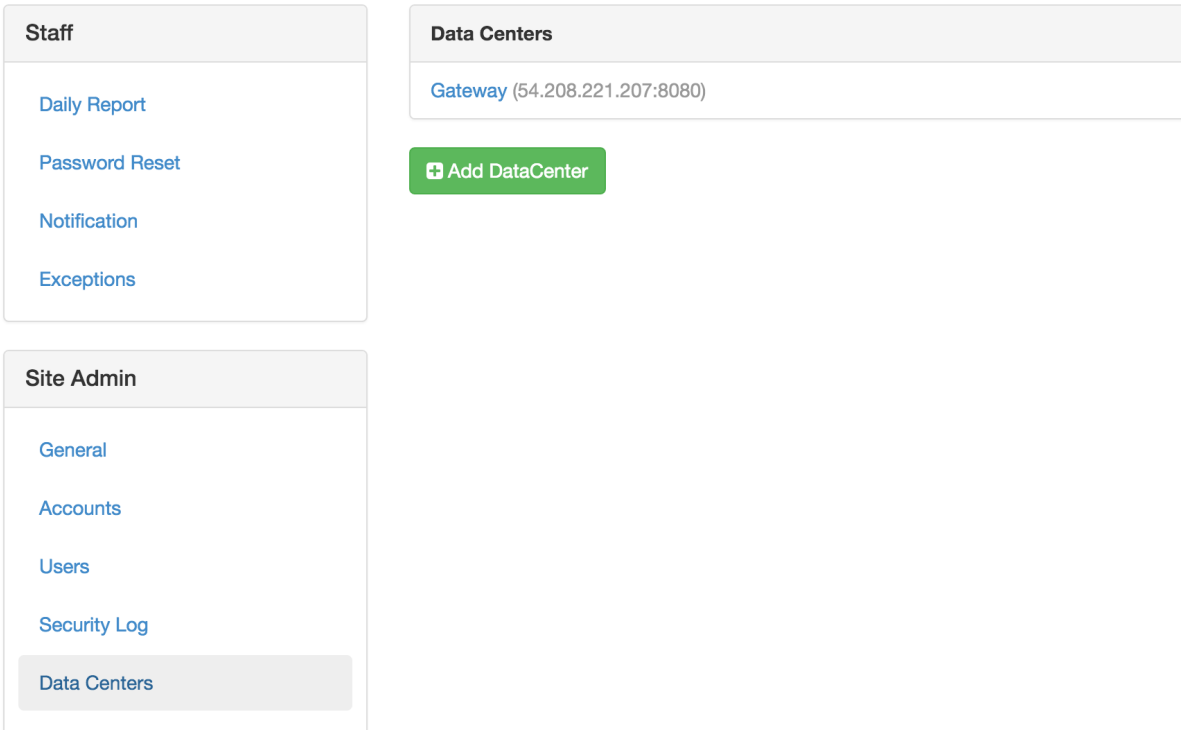
```
sudo service wakari-gateway start
```

Verifying your gateway registration

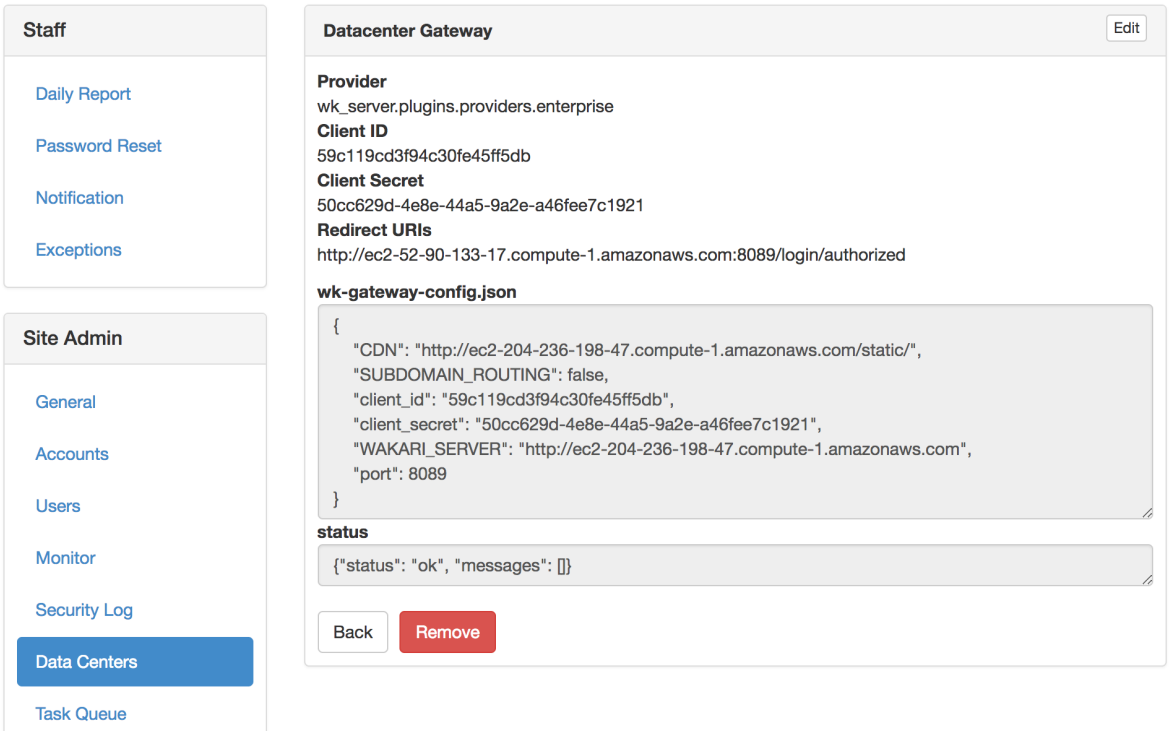
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.2-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

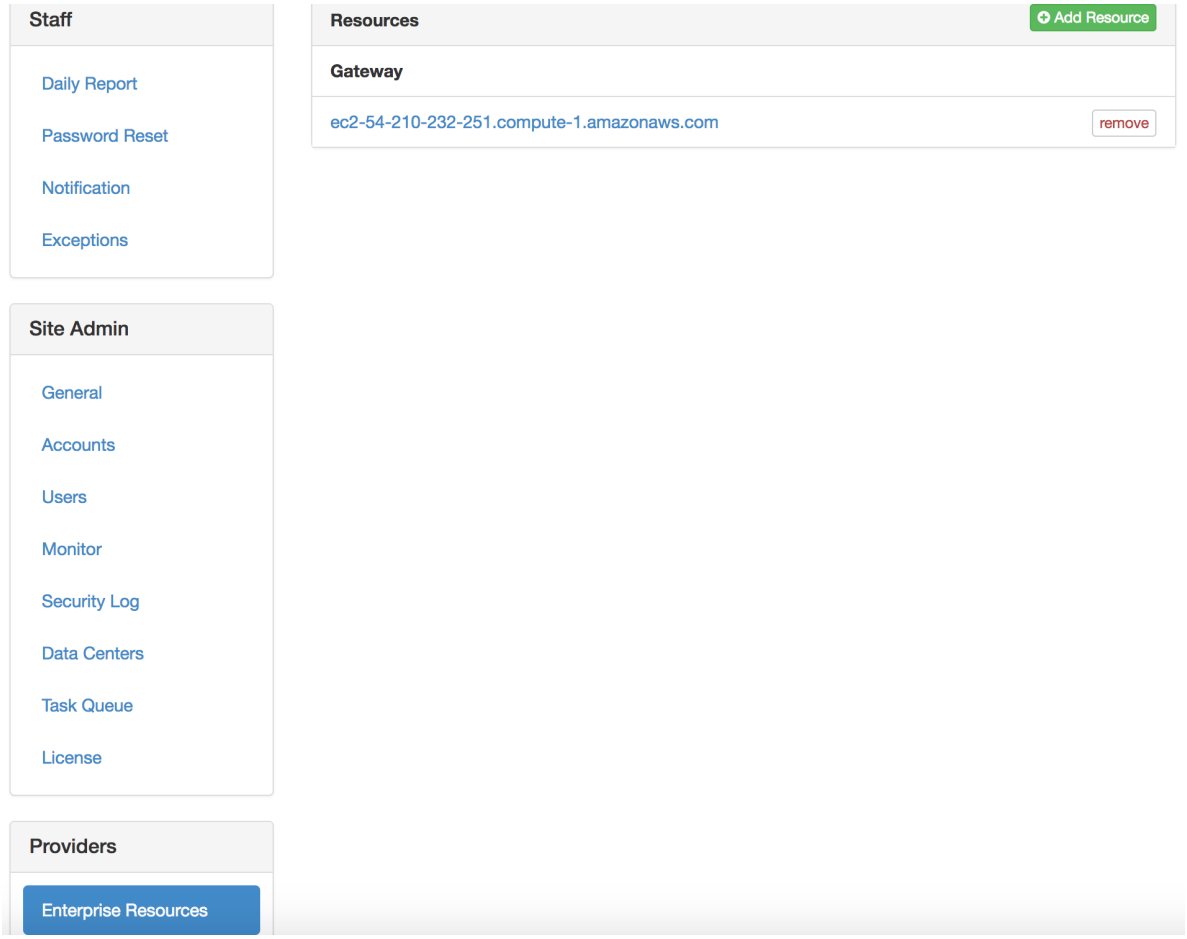
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

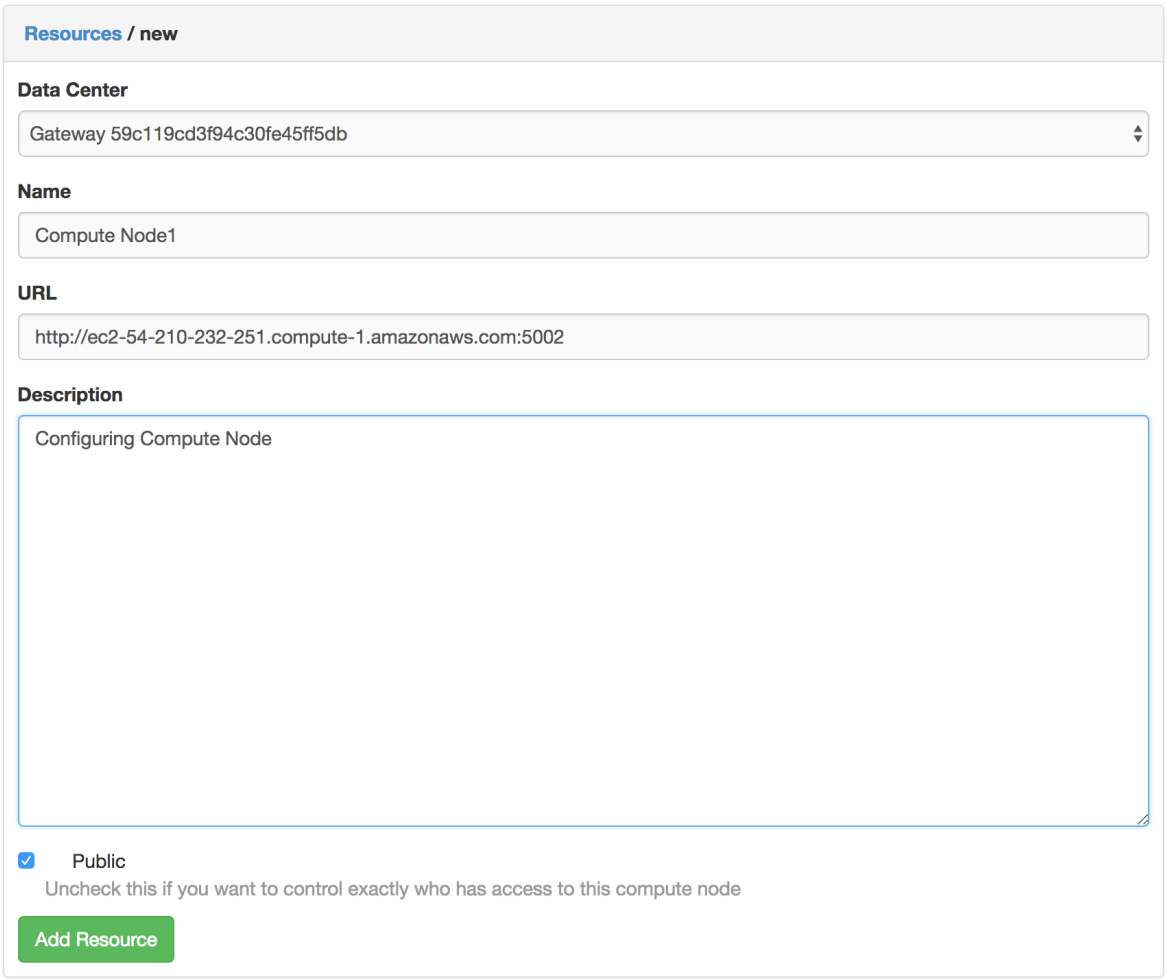
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the AEN_SRVC_ACCT user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda repository server instead of Anaconda.org.

To configure AEN to use a local on-site repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.anaconda.com
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with the repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node, run the following command, replacing <your Anaconda Repository> with the actual name or IP address of your local Anaconda Repository installation:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo access is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 300: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The Cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some Enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled.
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set `uniqueEmail` to `false`, you must drop the existing index in the database. EXAMPLE: If the index name is `email_1`, run `db.users.dropIndex("email_1")`.

Table 301: Gateway Configuration Keys

Key	Default	Description
`WAKARI_SERVER`		The URL of the AEN `WAKARI_SERVER`.
`port`	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
`client_id`		The client ID assigned to this gateway by the server during `wk-gateway-configure`.
`client_secret`		The Client secret assigned to this gateway by the server during `wk-gateway-configure`.
`httpTimeout`	600	Timeout in seconds. The default is 10 minutes to allow project creation.
`logLevel`	`info`	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
`https`		Enable SSL encryption. For more information, see *Configuring SSL*.
`- key`		A https subkey–Path to gateway key.
`- cert`		A https subkey–Path to gateway cert.
`- ca`		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
`- passhphrase`		A https subkey–Passphrase required to decrypt SSL certs.

Table 302: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.

Table 303: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server.plugins.providers.enterprise"]	A list of compute provider classes.
MONGO_ACTION_LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM _EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 304: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 305: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari- compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

```
"httpTimeout": 600
```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda environment directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

```
"projectRoot" : "/nfs/storage/services/wakari/projects",
```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the identicalGID key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: ALL
```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

```
"MANAGE_ACCOUNTS": false,
```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

   ```
   "AEN_SUDO_CMD": "/path/to/alternative/sudo",
   ```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
   ```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

   ```
   "AEN_SUDO_SH": "/path/to/gatekeeper"
   ```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.

3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.

4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.

5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.

8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

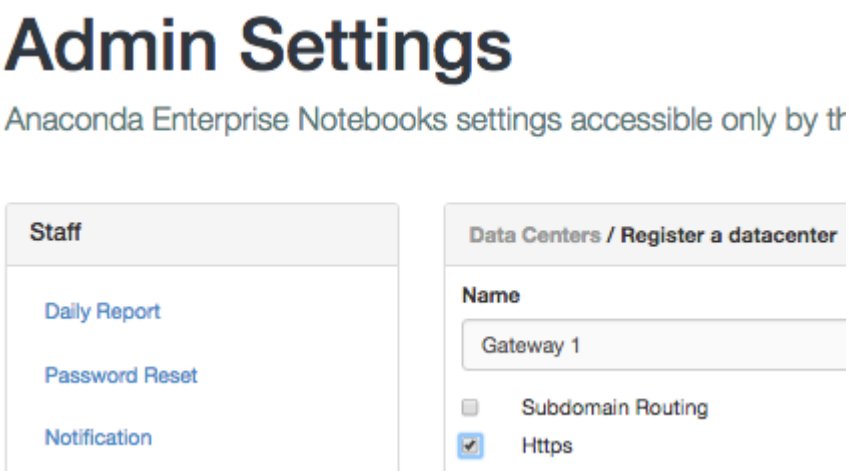
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

   NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt"
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

   NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

   EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

```
{
EXISTING_CONFIGURATION,
"SECRET_KEY": "<repo signing secret>",
"REPO_LOGIN_URL":
   "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
}
```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

```
{
EXISTING_CONFIGURATION,
"accounts": "wk_server.plugins.accounts.repo",
}
```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The `jupyter-contrib-nbextensions` extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in */opt/wakari/wakari-compute/share/jupyter/kernels/*.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel without the user .ipython space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The pyspark.sh script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: *.local/share/jupyter/kernels/pyspark/*. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following kernel.json file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace "<username>" with the correct user name and "<project_name>" with the correct project name.

You may choose any name for the 'display_name'.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"
```

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```
# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Enabling server-side session management

By default, AEN uses client-side session management which is vulnerable to session replay attacks if an attacker manages to steal a valid session ID of a user.

To enable server-side session management:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "USE_SERVER_BASED_SESSIONS": true,
   ```

2. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

Terminate terminal sessions on logout

By default, when a user logs out, their open terminal sessions will remain active.

To disable this behavior:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

2. Modify the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

3. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

4. Restart the AEN gateway service:

   ```
   sudo service wakari-gateway restart
   ```

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.3.2 from 4.3.1 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.3.1 upgrade instructions*
- *AEN 4.3.0 upgrade instructions*
- *AEN 4.2.2 upgrade instructions*
- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                             \
                 wakari-enterprise-server-conf-update=2.0.12
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

   AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

   Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.

9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.12
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

   ```
   ps aux | grep wakari-indexer
   ```

   NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

   Terminate any remaining `wakari-indexer` processes:

   ```
   sudo killall wakari-indexer
   ```

   NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

   ```
   ps aux | grep wk-app-gateone
   ps aux | grep wk-app-workbench
   ps aux | grep wk-app-viewer
   ps aux | grep wk-app-terminal
   ps aux | grep jupyter-notebook
   ```

   NOTE: If you stopped all the projects, you will not see any AEN app processes running.

   Terminate any remaining AEN application processes by running one or more of the following:

   ```
   sudo killall wk-app-gateone
   sudo killall wk-app-workbench
   sudo killall wk-app-viewer
   sudo killall wk-app-terminal
   sudo killall jupyter-notebook
   ```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

   ```
   channels:
     - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
     - r
     - https://conda.anaconda.org/wakari
     - defaults

   create_default_packages:
     - anaconda-client
     - ipykernel
   ```

NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade *Anaconda* in the root environment:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
             -p /opt/wakari/anaconda              \
             --file aen-anaconda-update-4_3_2
popd
```

5. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                -p /opt/wakari/wakari-compute        \
                --file aen-compute-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                --no-deps                            \
                -p /opt/wakari/wakari-compute        \
                wakari-enterprise-compute-conf-update=2.0.16
popd
```

NOTE: When upgrading the wakari-compute environment, you may see ImportError warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

6. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

7. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

8. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

9. Install necessary dependencies:

NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

10. Start the compute service:

```
sudo service wakari-compute start
```

11. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

12. Restart the AEN Server with:

```
sudo service wakari-server restart
```

13. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4.3.2
popd
```

   To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4.3.2

sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4.3.2
popd
```

   NOTE: Replace `<USER>` with the user's name. Replace `<PROJECT>` with the project name.

   NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

NOTE: These commands update packages listed in `aen-anaconda-update-4.3.2` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

   ```
   service wakari-server stop
   ```

2. Stop MongoDB:

   ```
   service mongod stop
   ```

3. Remove AEN server software, AEN database files and NGINX configuration:

   ```
   rm -Rf /opt/wakari/wakari-server
   rm -Rf /opt/wakari/miniconda
   rm -Rf /var/lib/mongo/wakari*
   rm -Rf /etc/nginx/conf.d/www.enterprise.conf
   ```

   NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

   ```
   service mongod restart
   service nginx restart
   ```

5. Check for any outstanding server processes and stop them:

   ```
   ps -ef | grep -e wakari-server -e wk-server
   ```

6. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

7. Check for and remove any references to “aen” or “wakari” from the root user’s `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to “aen” or “wakari” from the root user’s `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

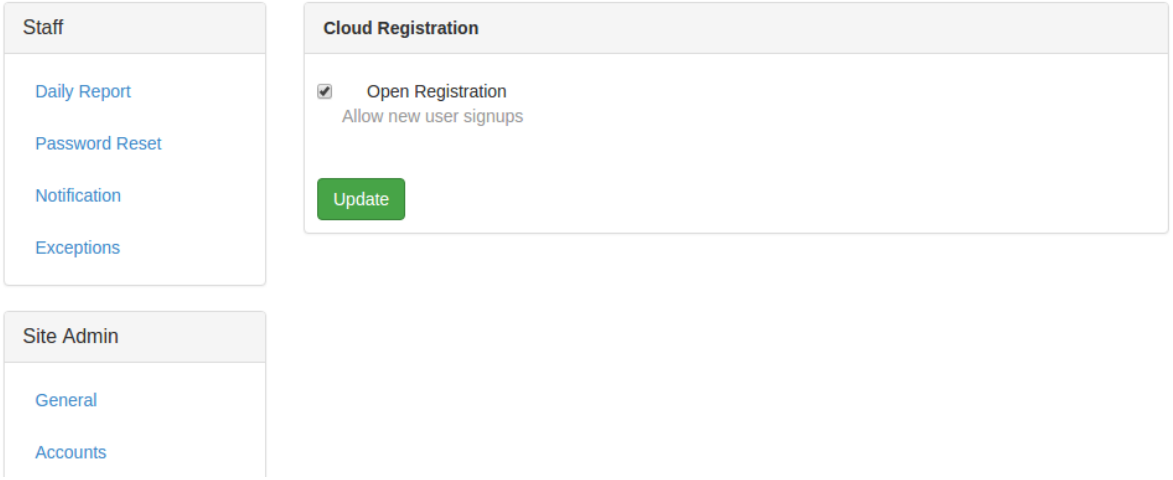
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

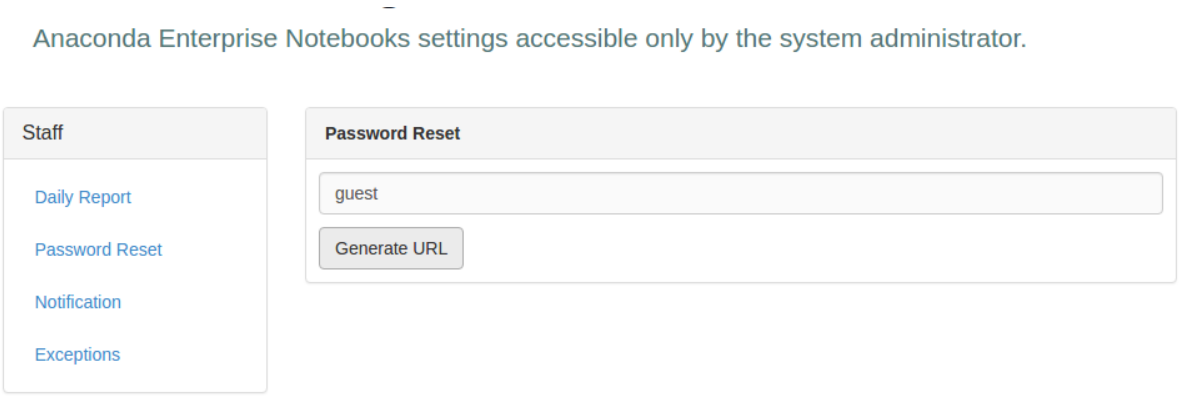
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.
2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

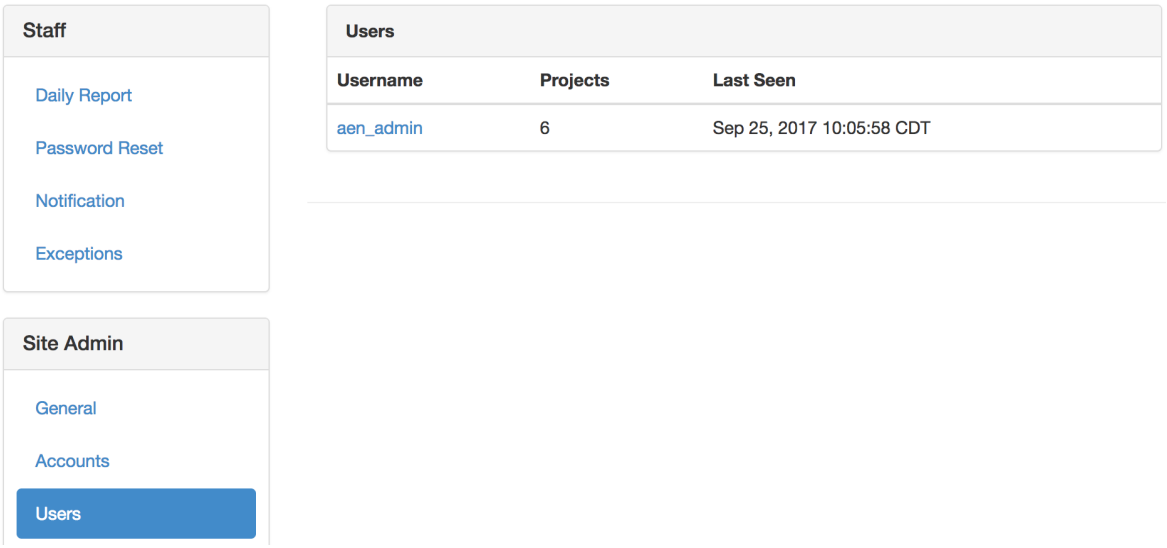
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

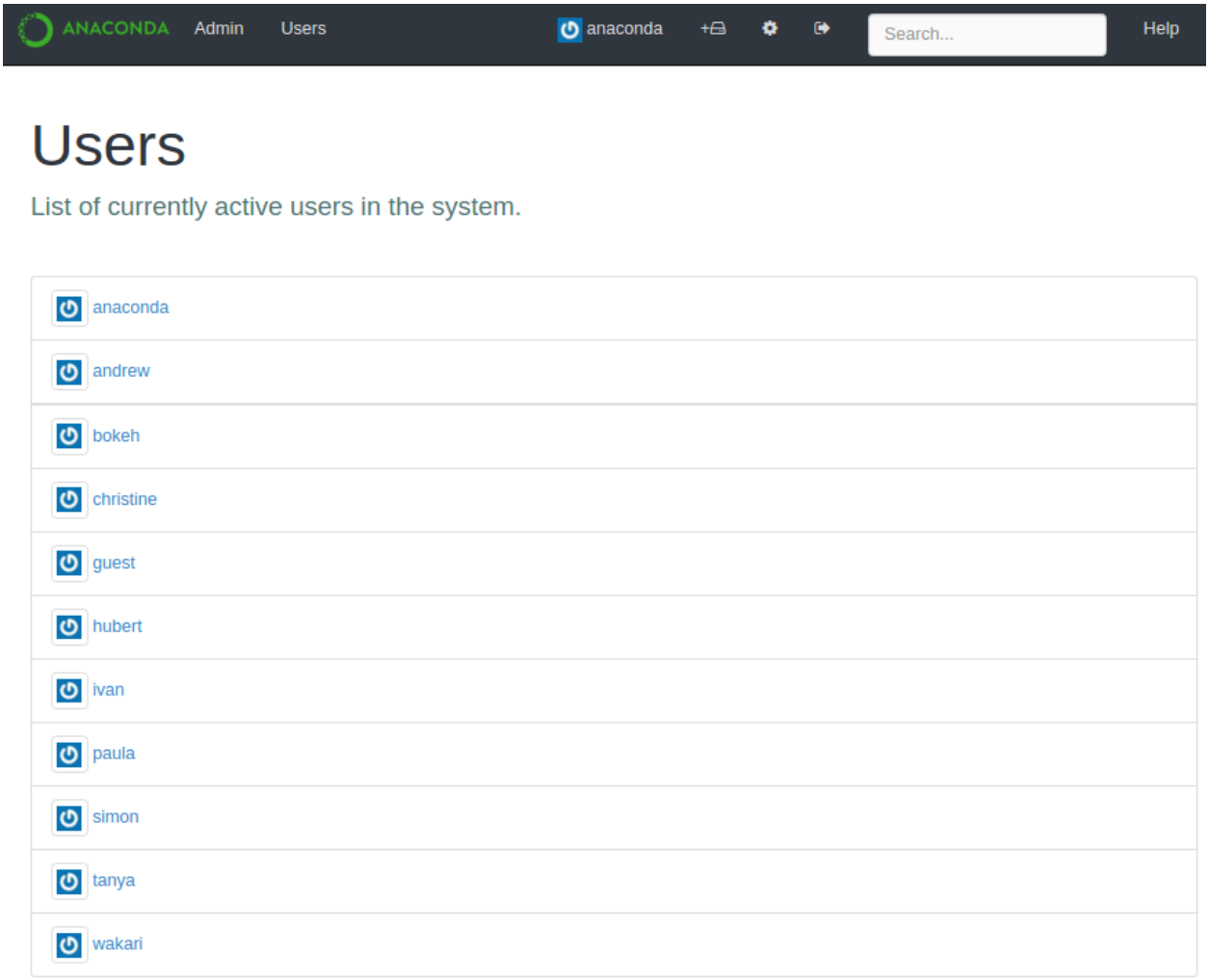
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

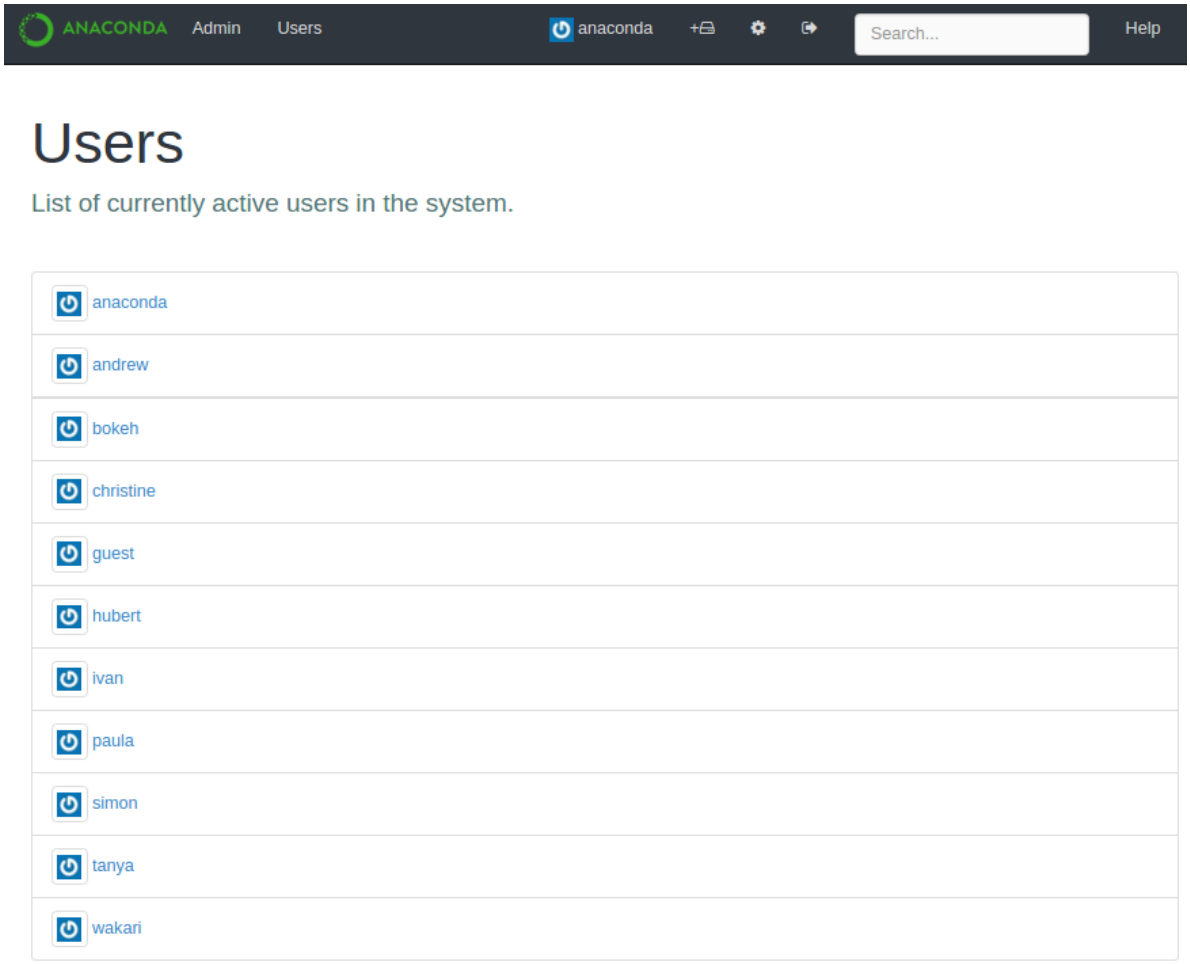


Click a username to open the user's profile page.

Viewing a user profile

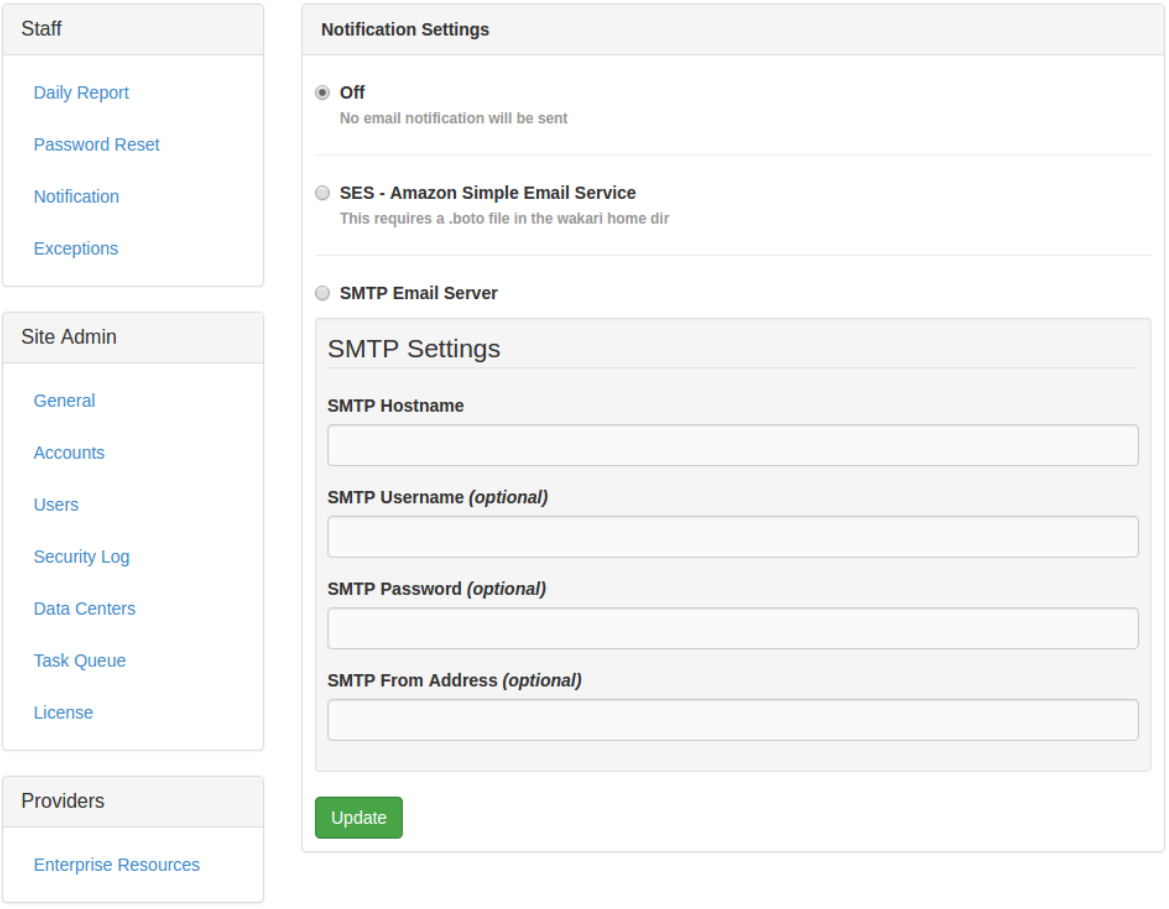
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

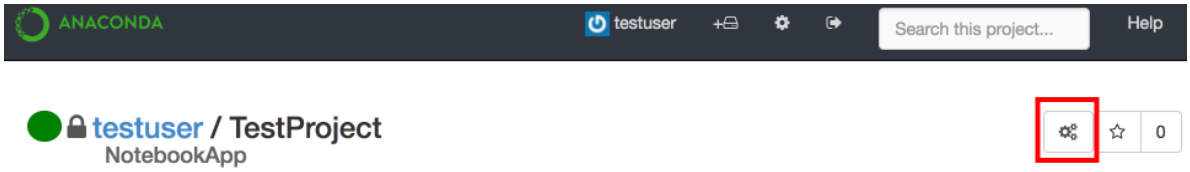
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

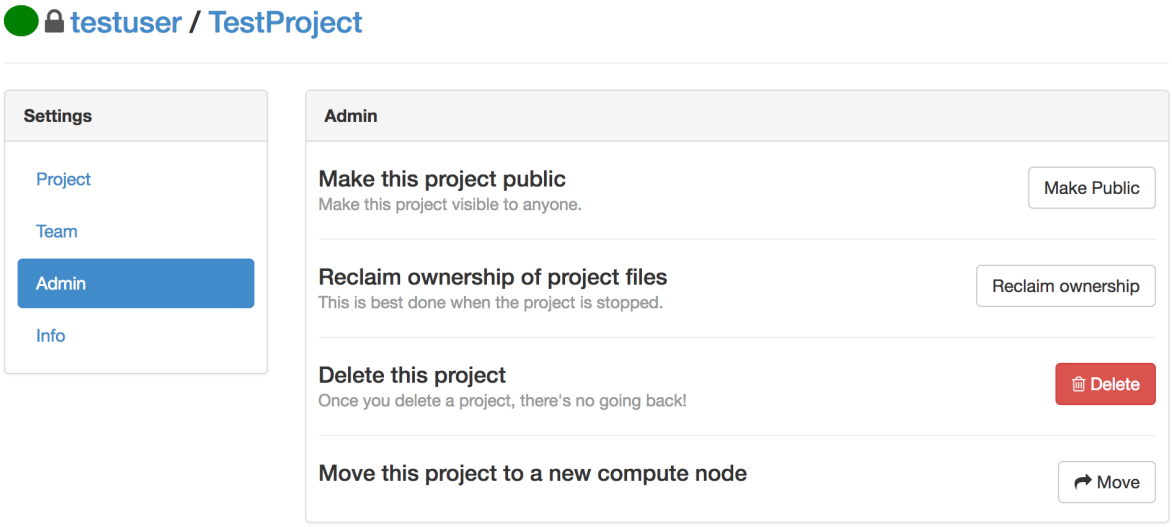
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

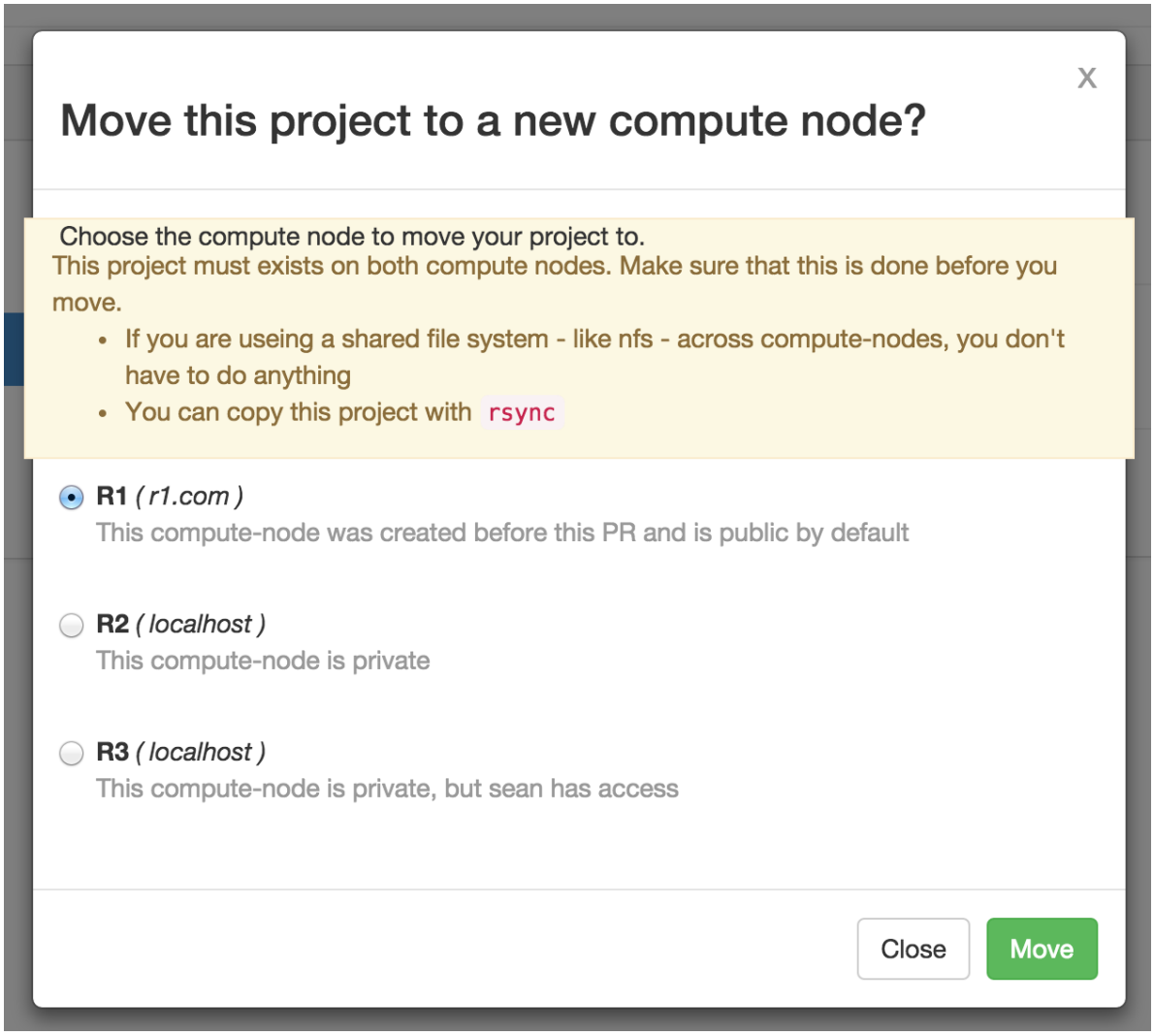
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

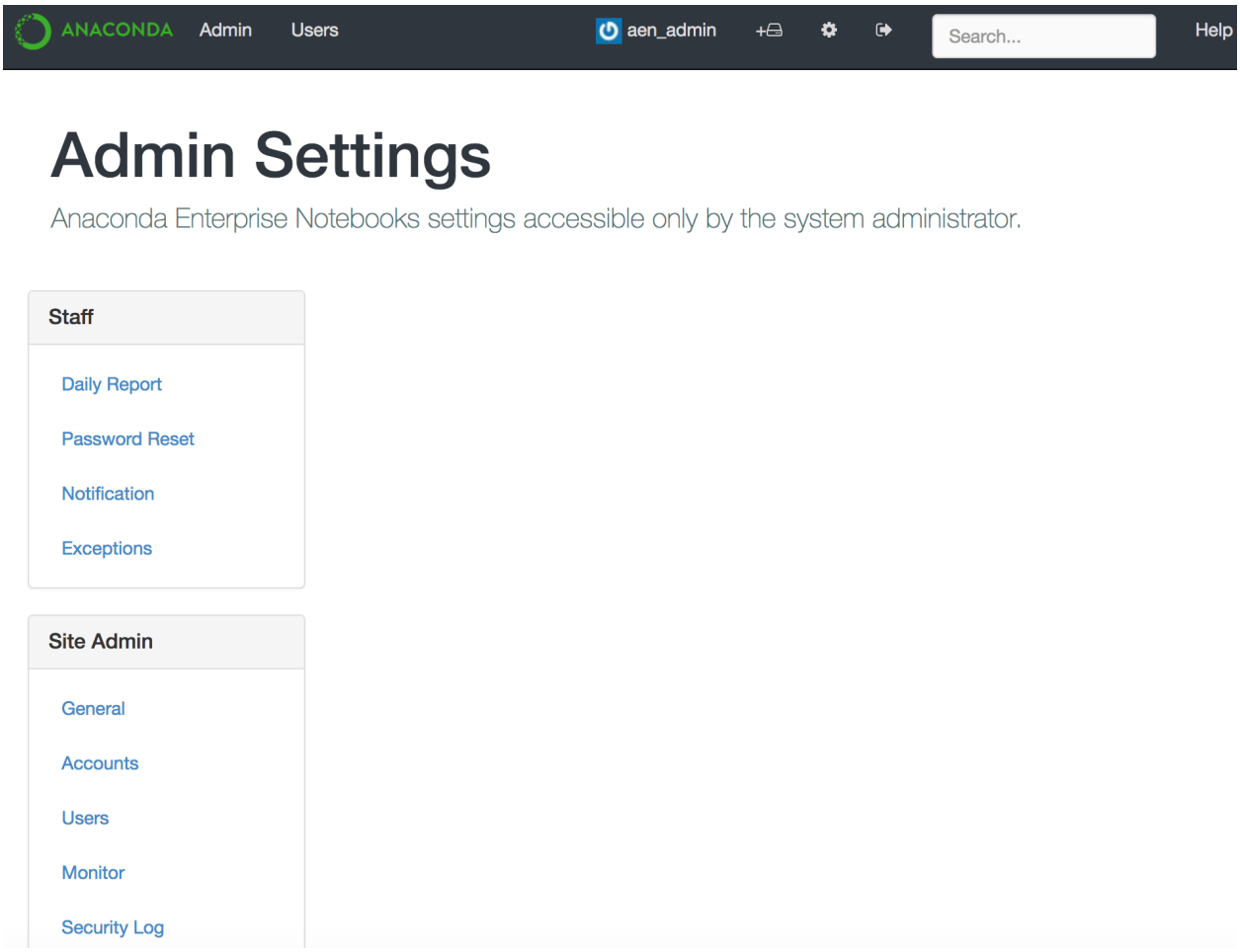
NOTE: Replace <username> with the actual username and <projectname> with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by $AEN_SRVC_ACCT.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by $AEN_SRVC_ACCT.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in /opt/wakari/wakari-gateway/etc/wakari/ and are owned by the $AEN_SRVC_ACCT.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.2-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

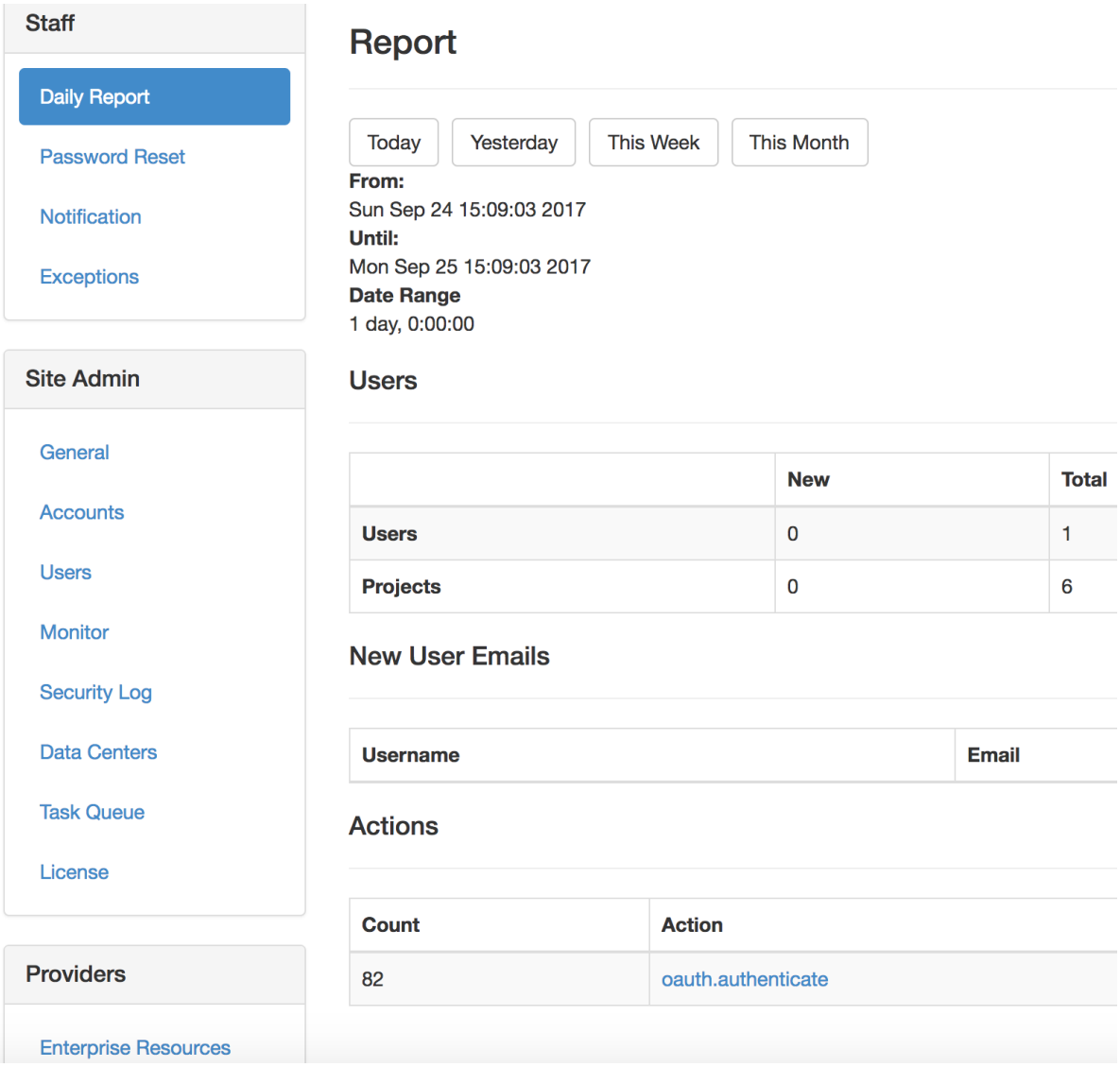
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



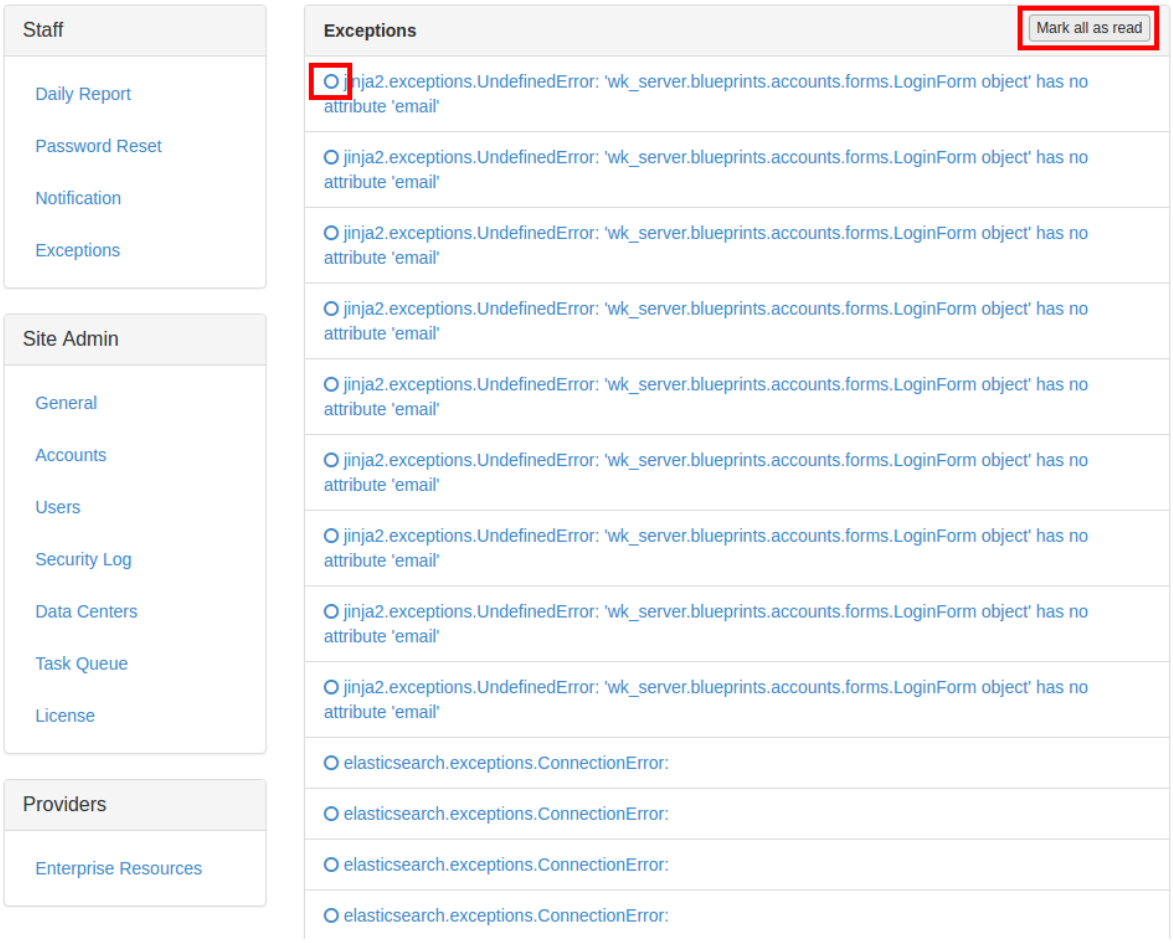
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

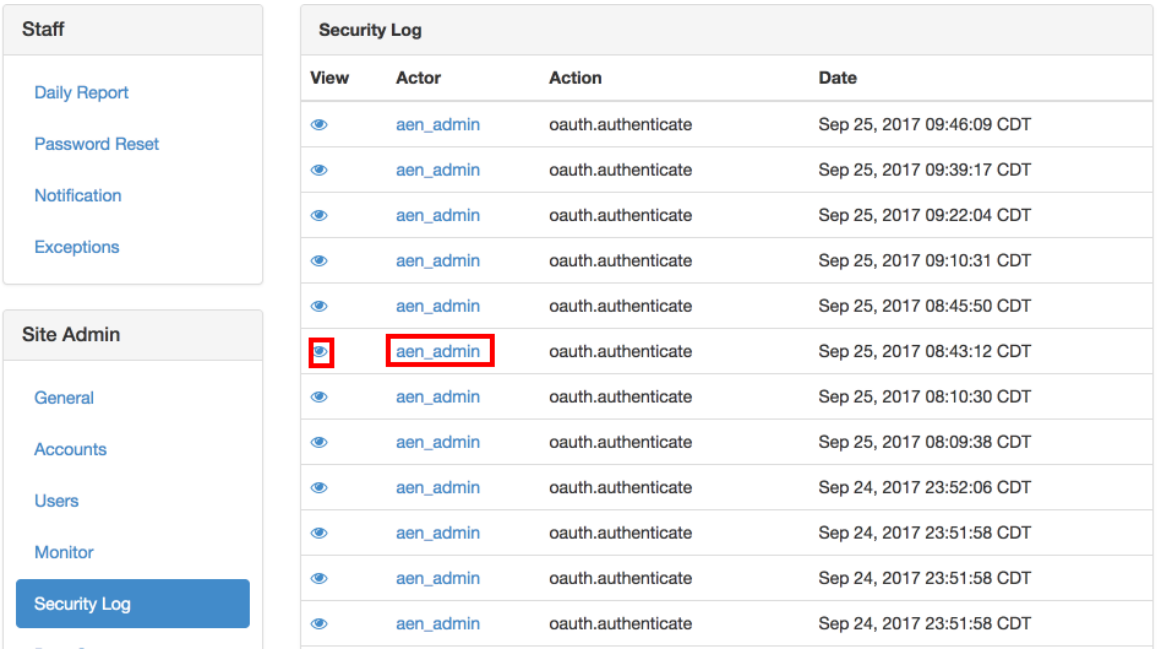
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

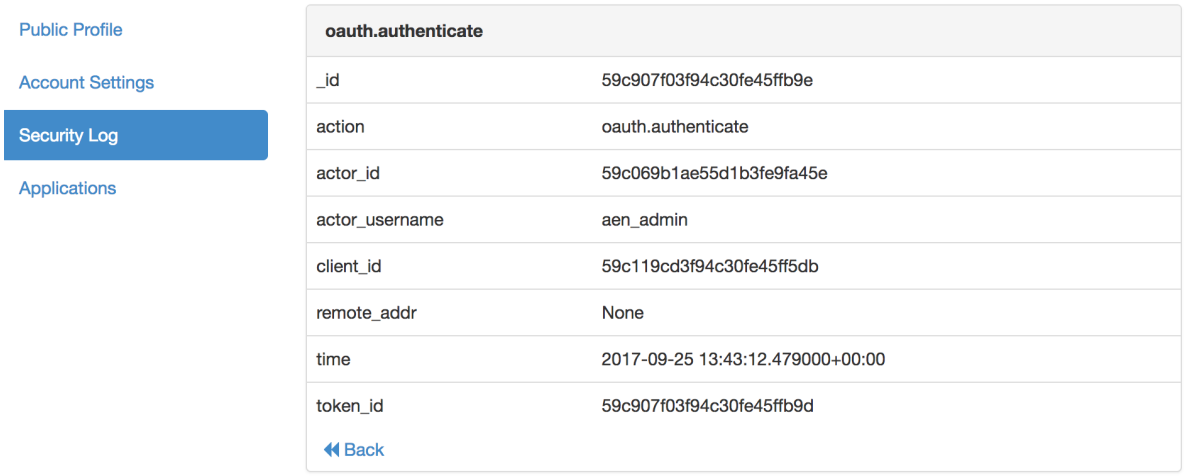
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

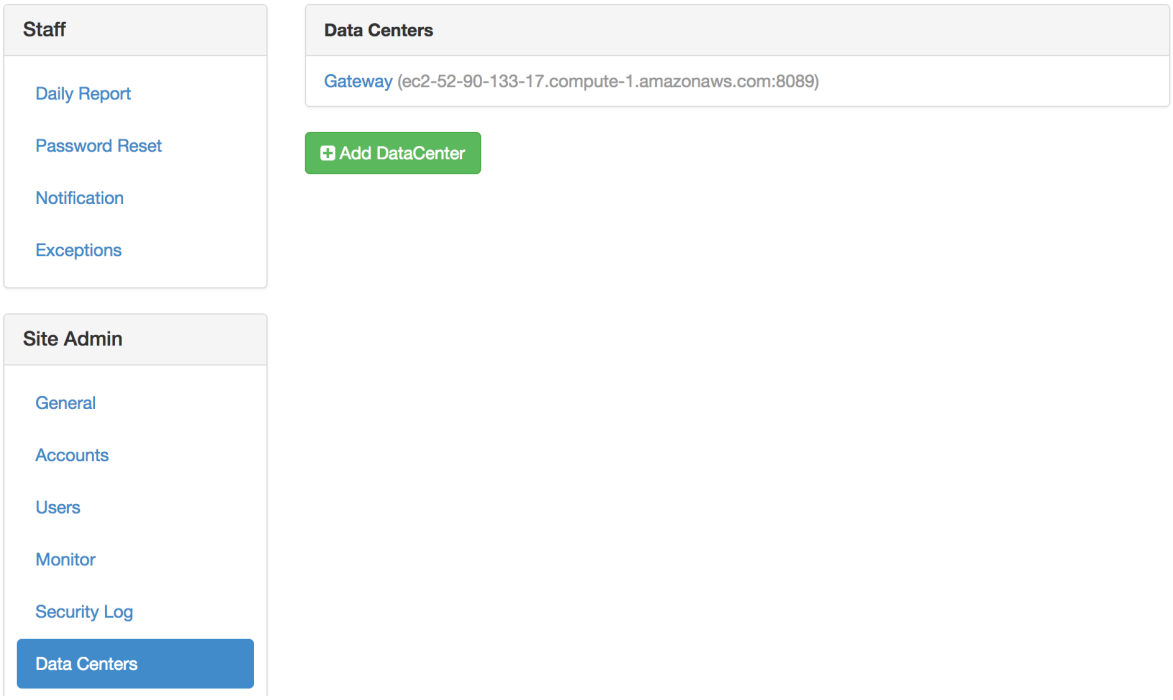
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

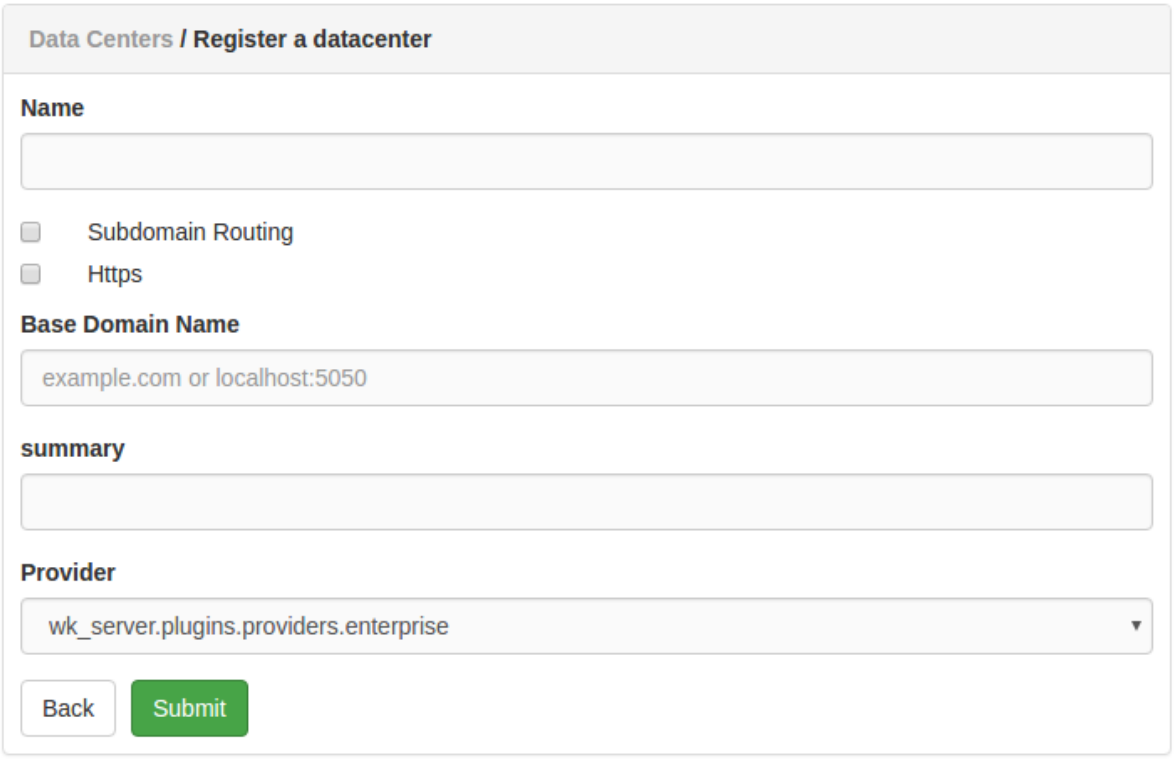
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

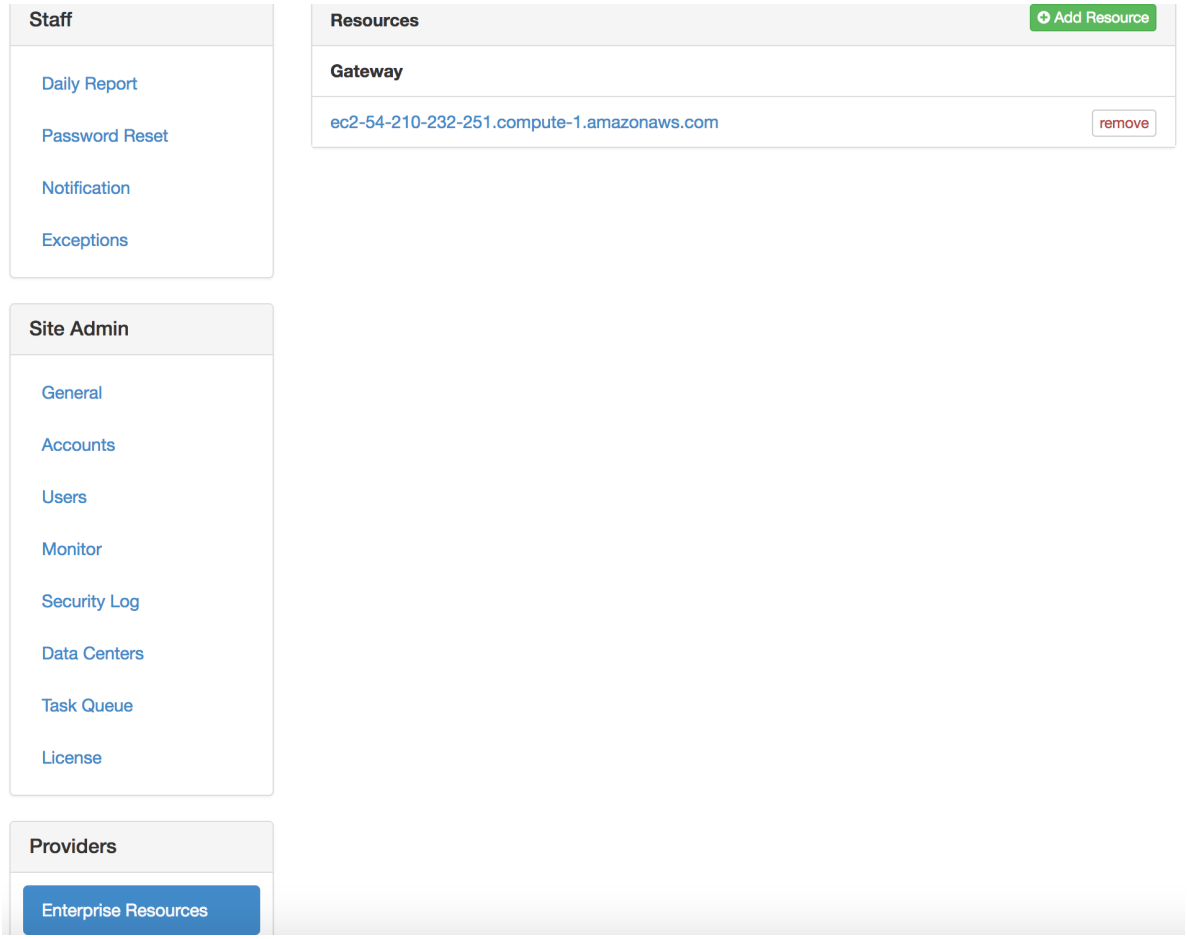
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

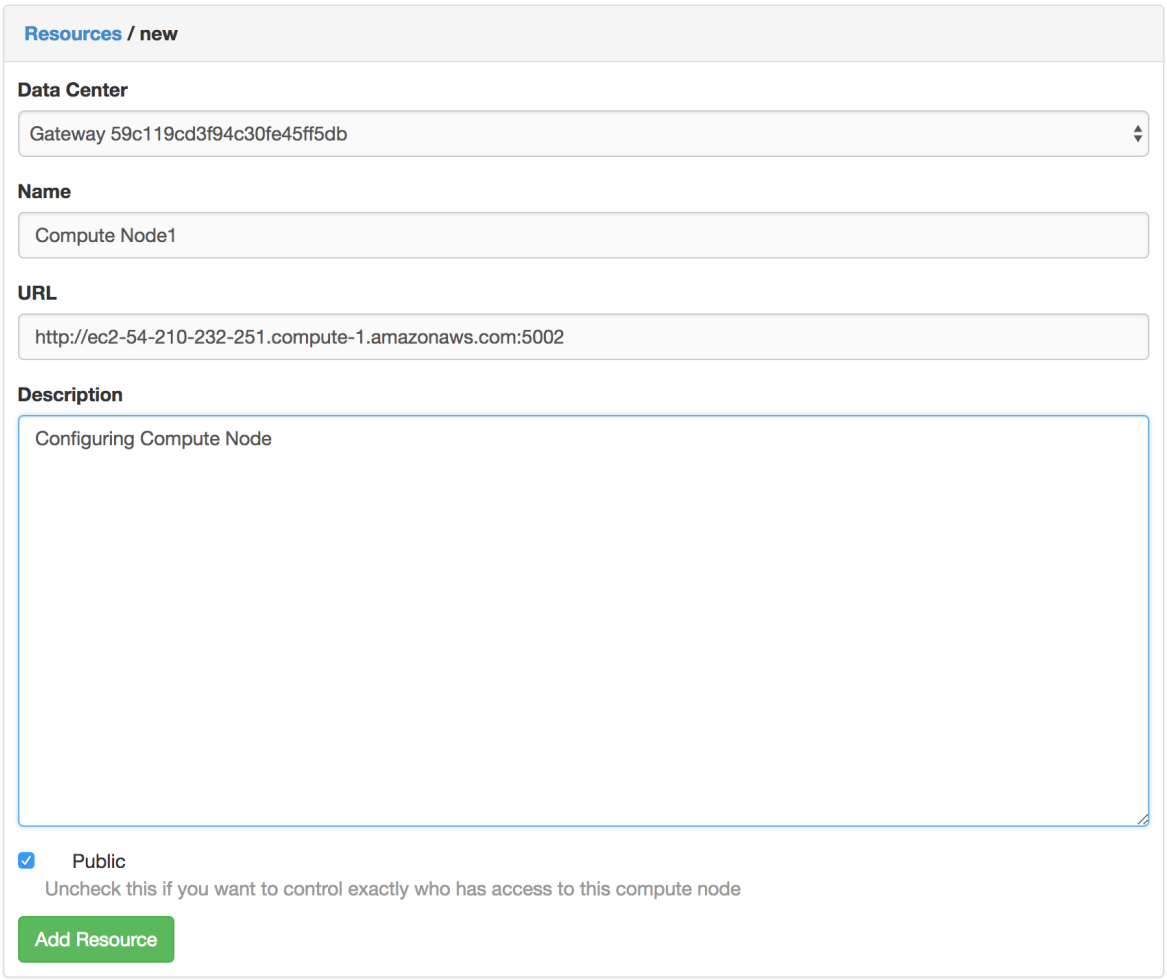
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

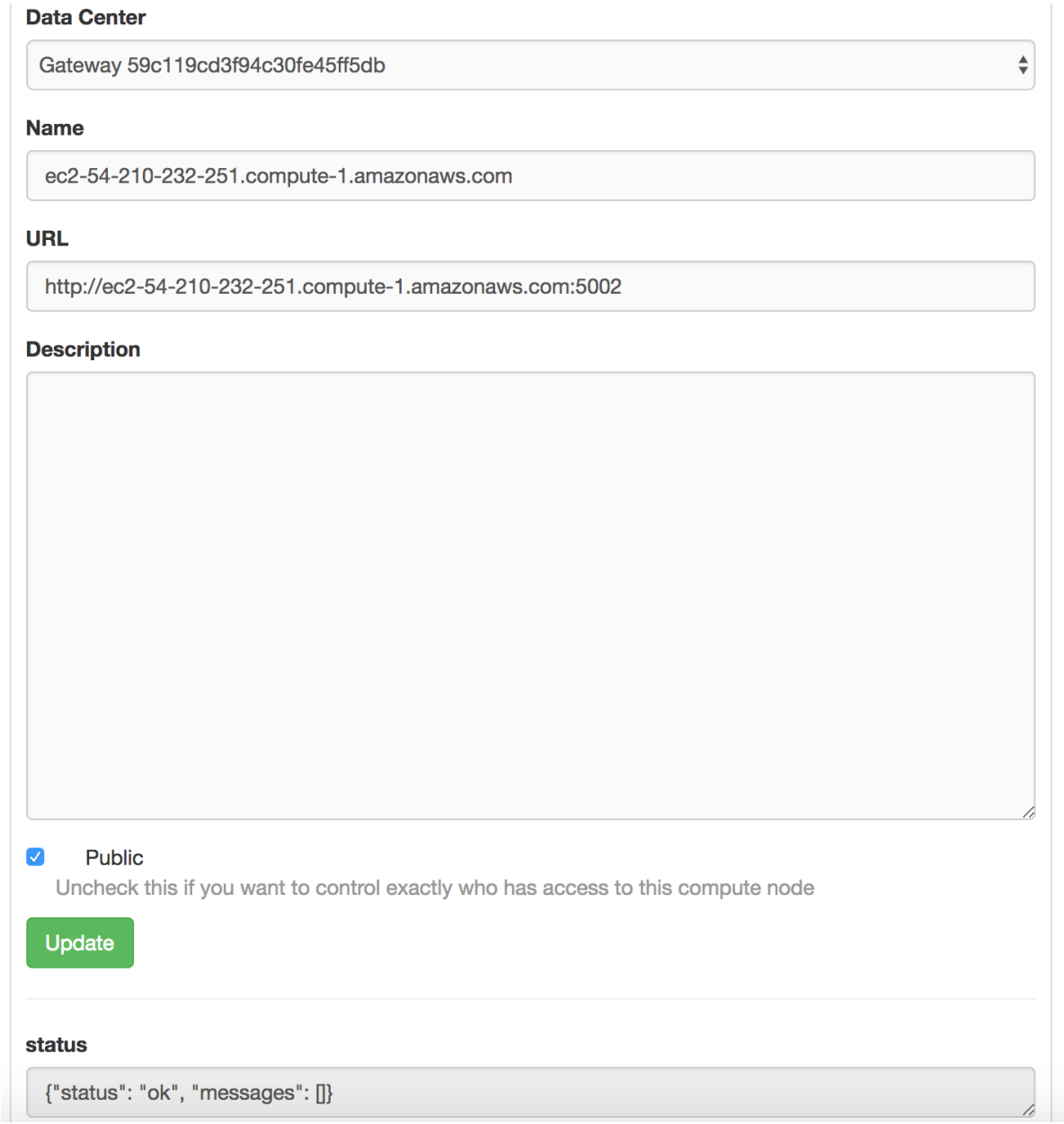
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

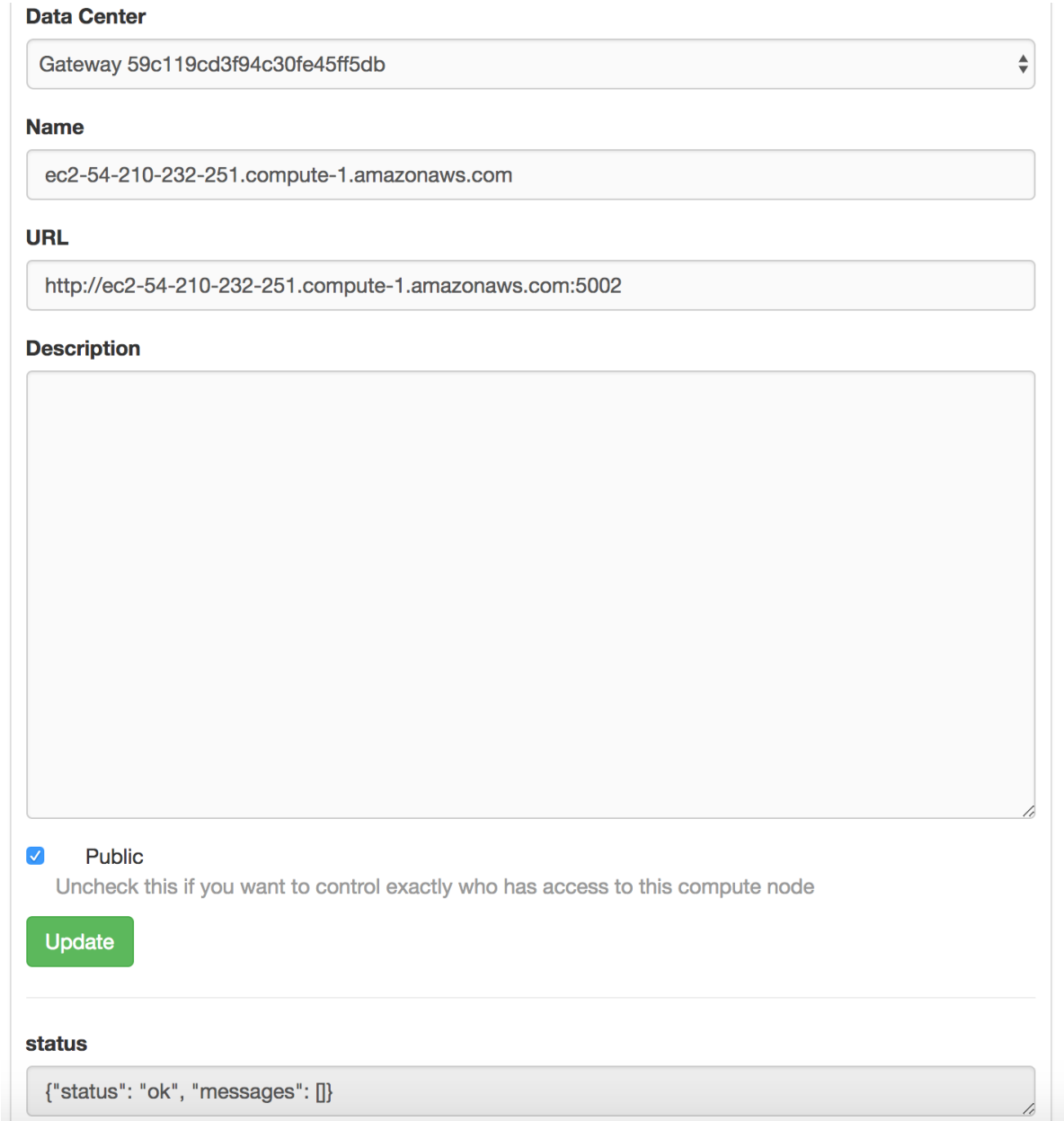
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, *move the project to a valid Compute Resource*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                        RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                           RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

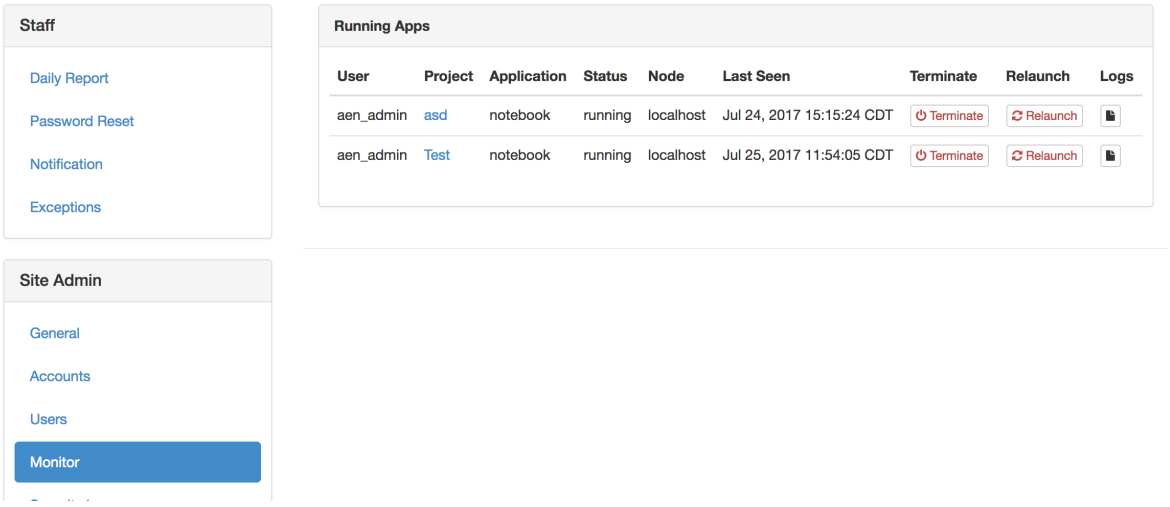
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

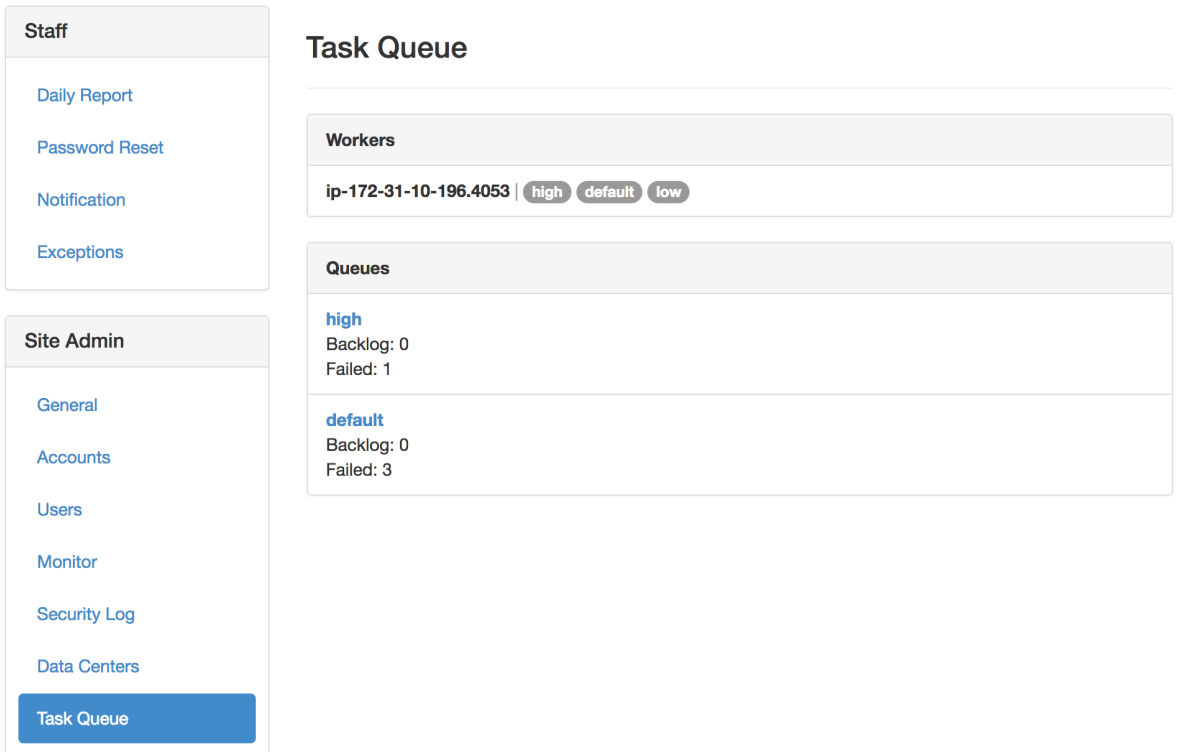
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

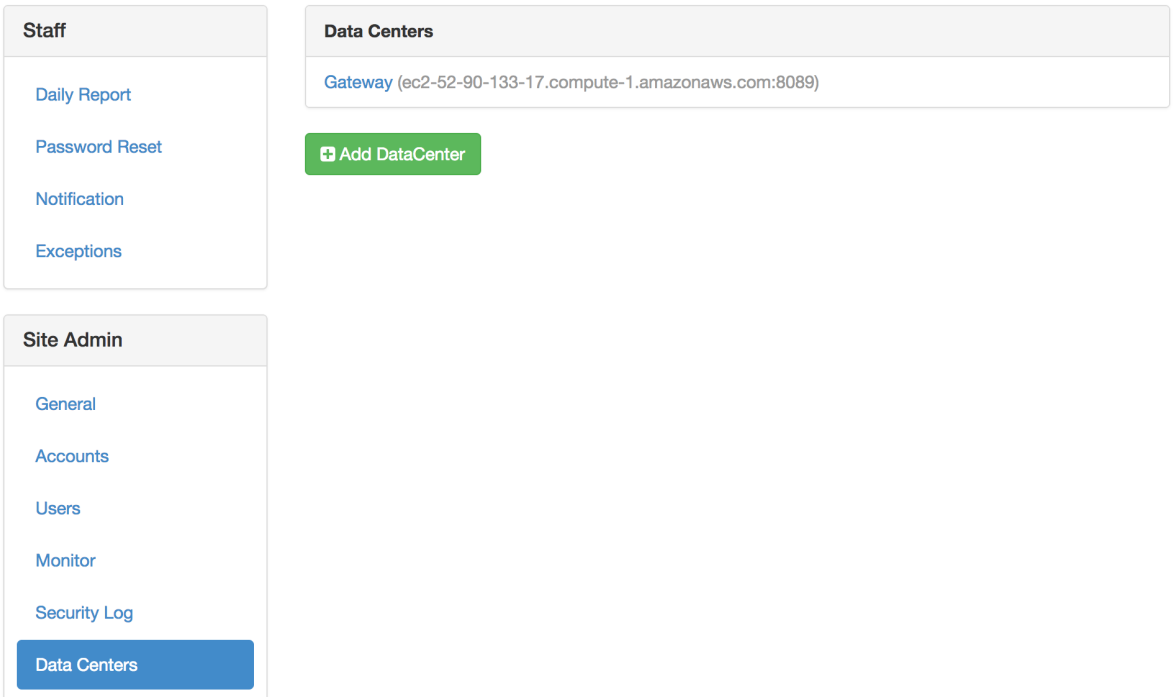
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



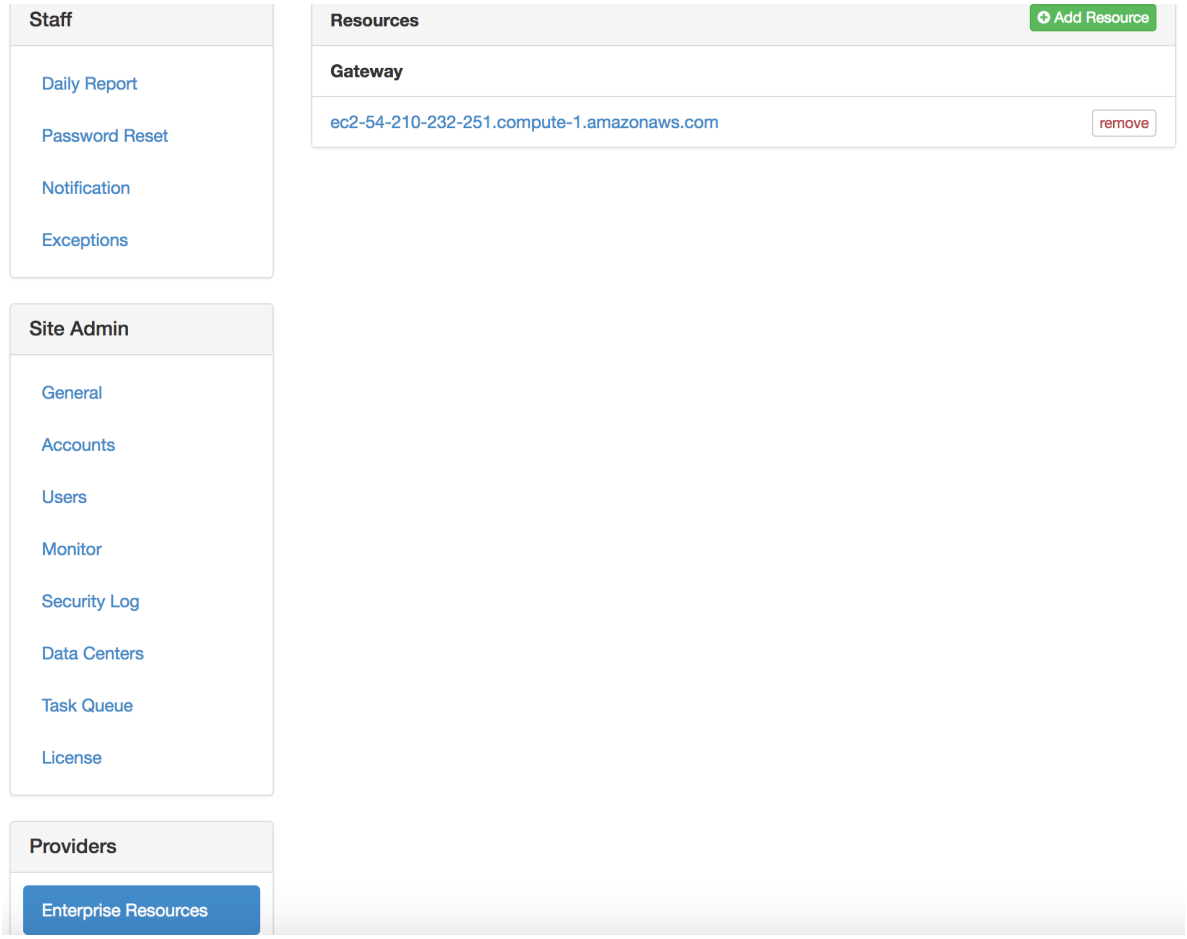
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

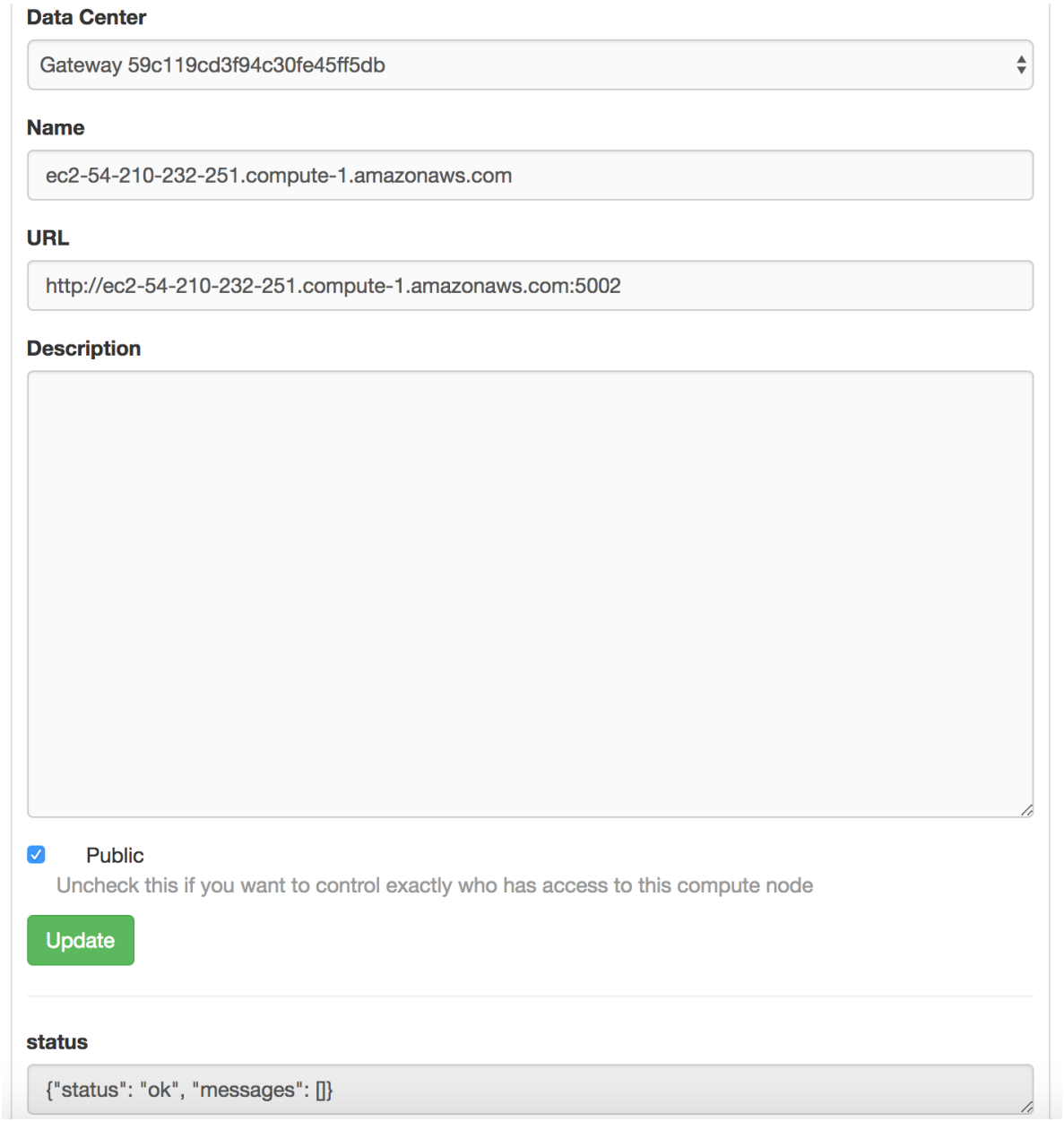
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

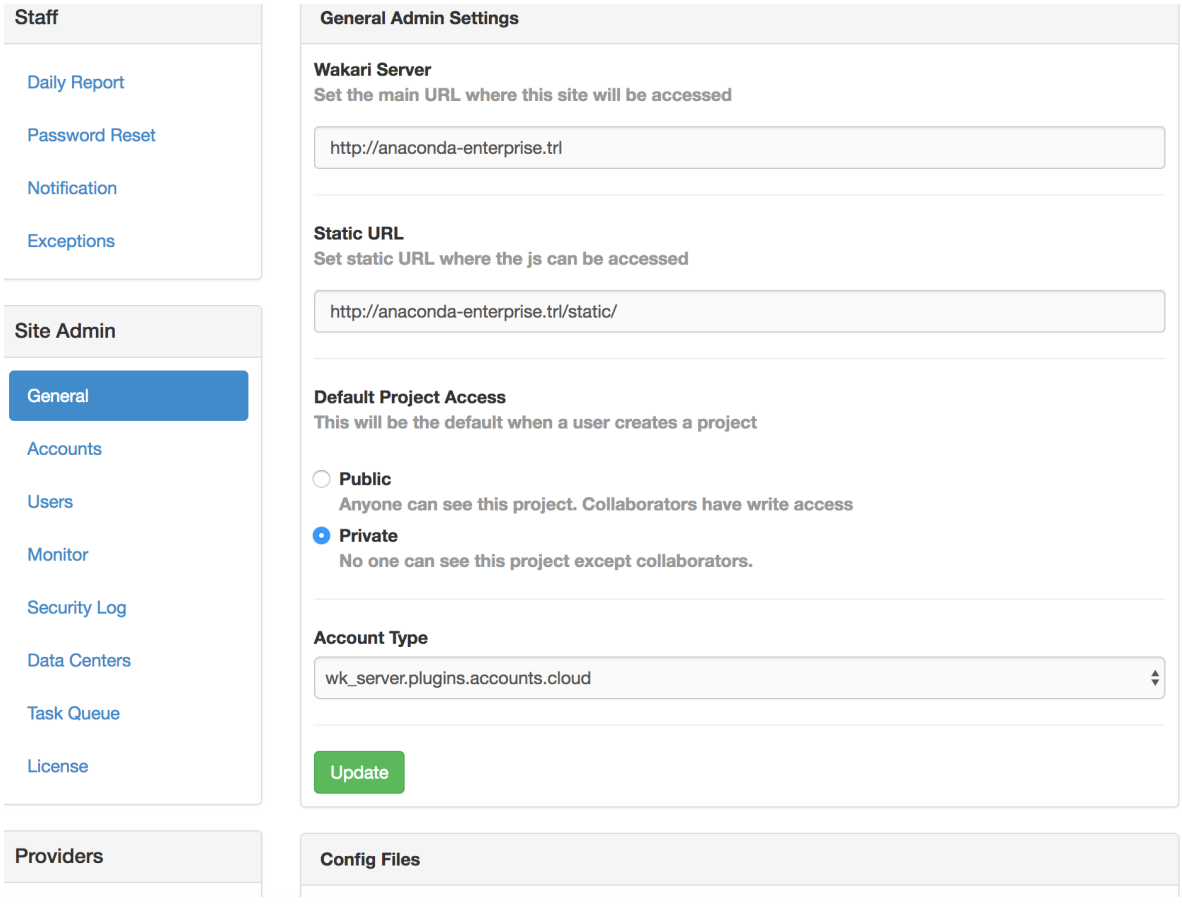
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

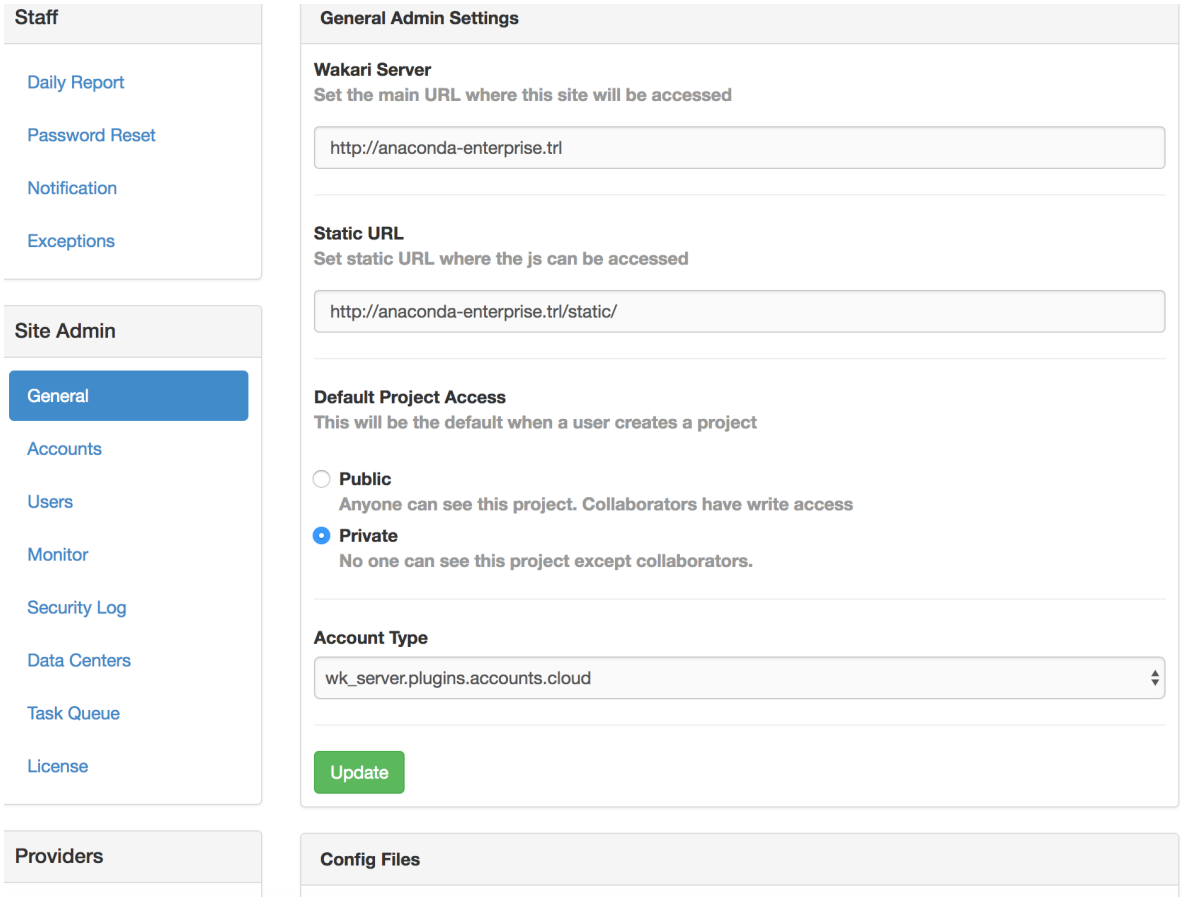
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

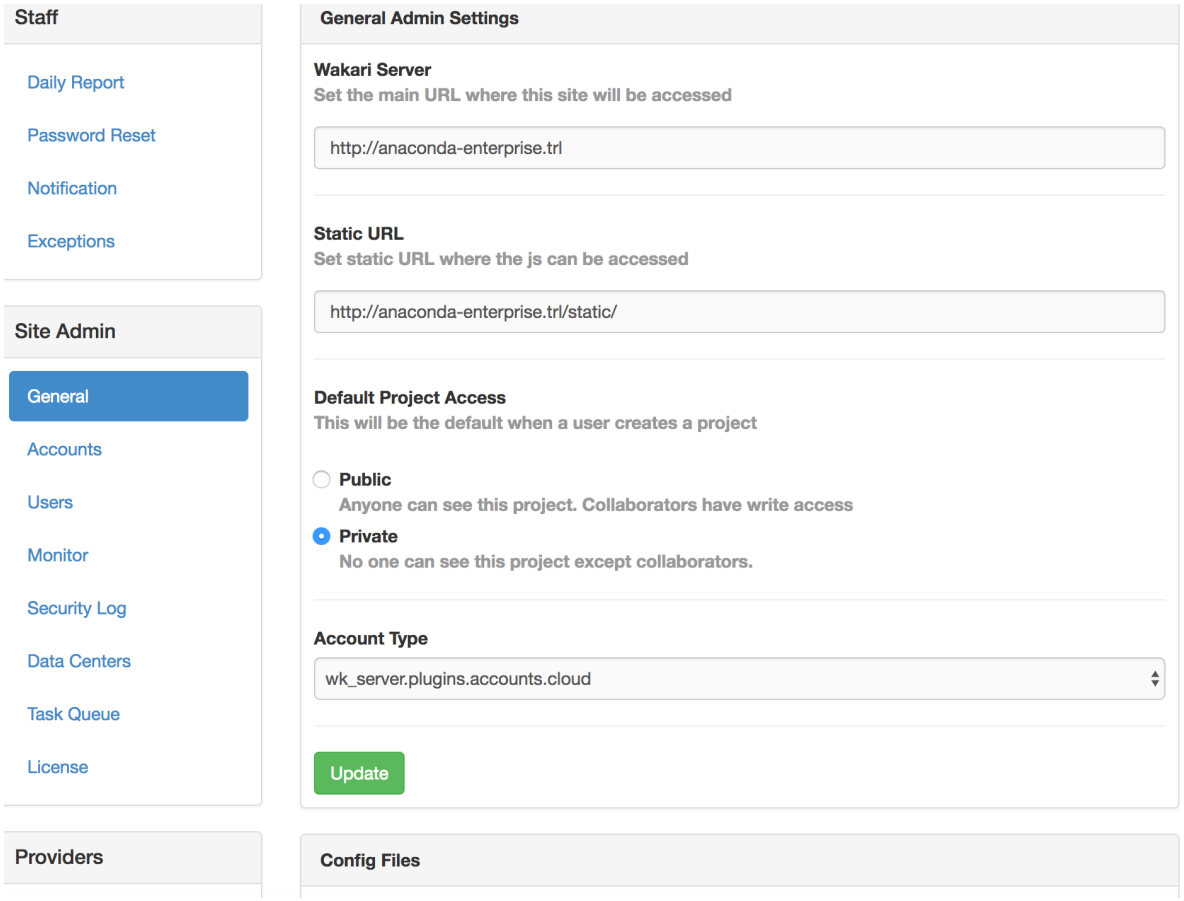
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

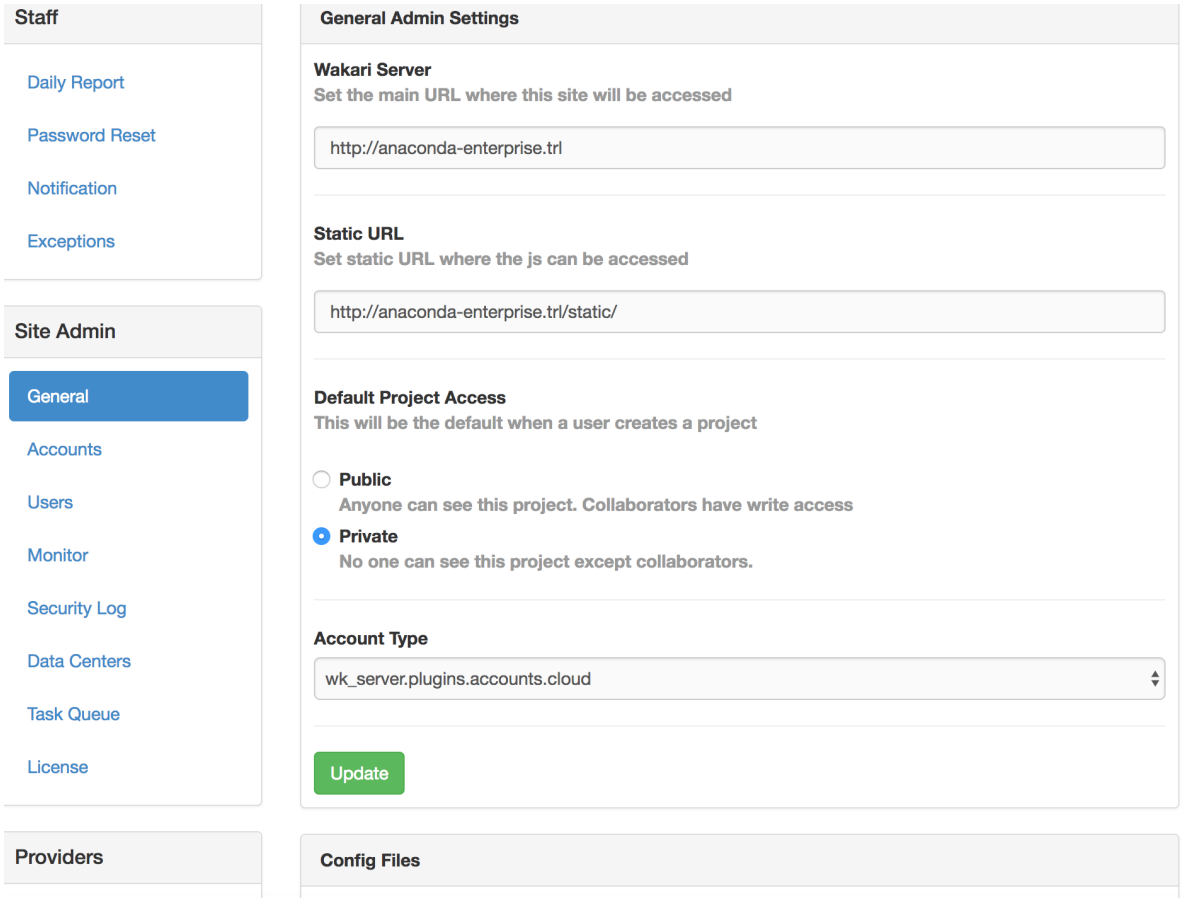
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

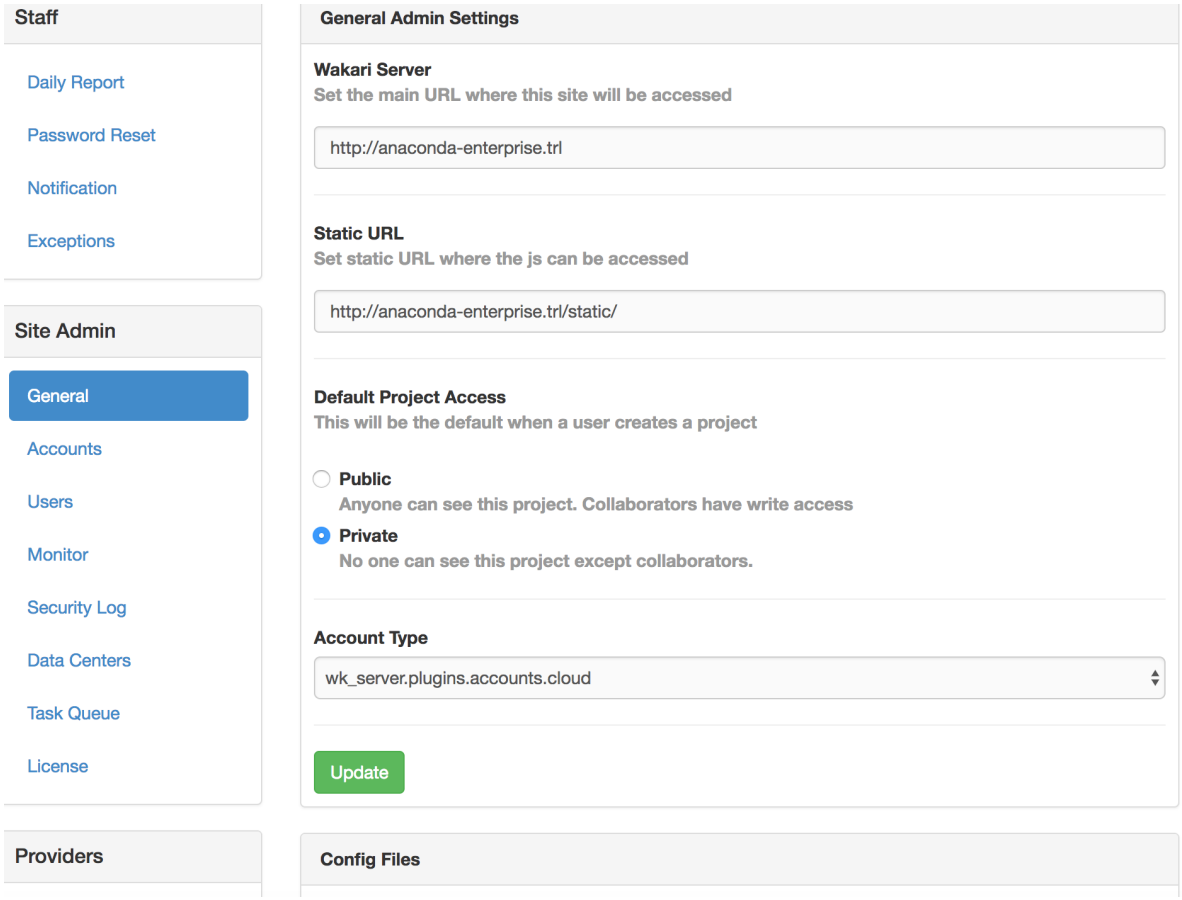
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

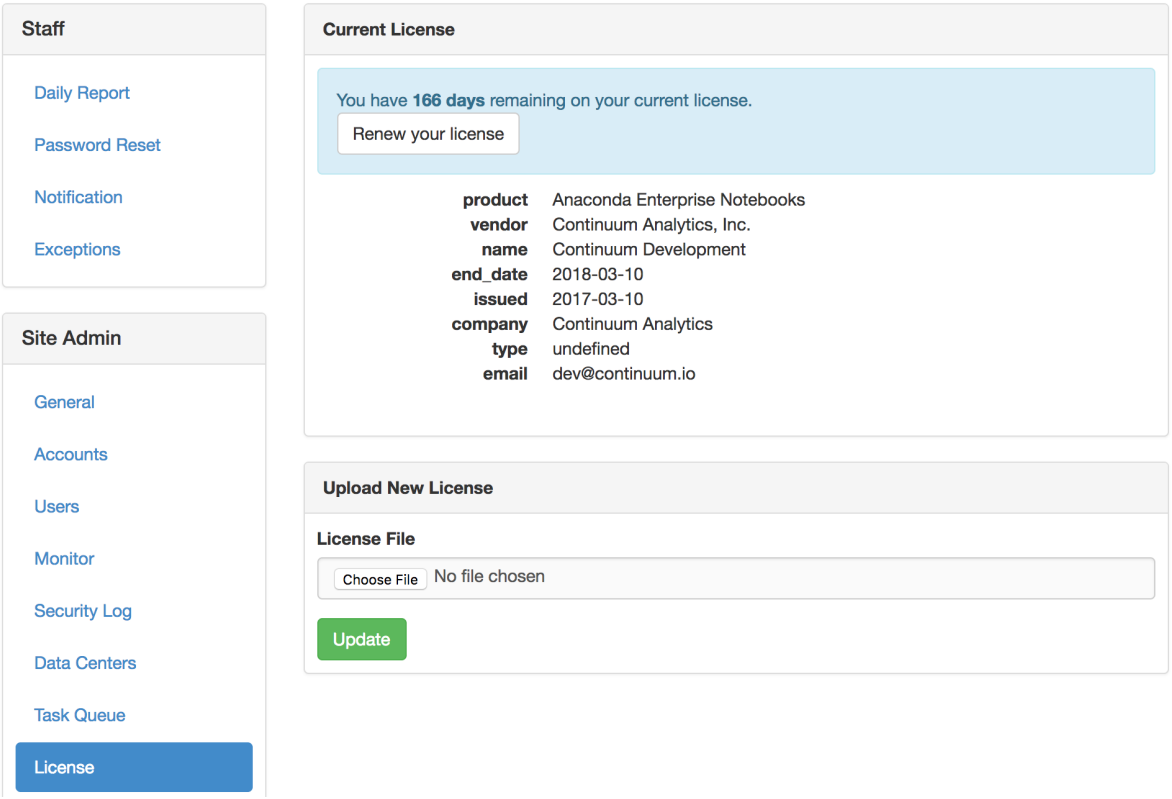
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart.
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services, and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.

7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.

3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise 4 Notebooks*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the AEN_SRVC_ACCT and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.3.2 May 29, 2019

Internal Fixes:

- Update Bootstrap to version 4.3.1
- Update jQuery to version 3.3.1
- Update jQuery UI to version 1.12.1
- Update notebook to version 5.7.8
- Update ipywidgets to version 7.4.2
- Update ipyparallel to version 6.2.3
- Set Secure flag on `xsrf`, `access_token`, and `refresh_token` cookies

v4.3.1 March 25, 2019

Administrator-facing changes:

- Add option for server-side session management
- Add option to terminate terminal sessions on logout

Internal Fixes:

- Set Secure and HTTPOnly flag on session cookies
- Fix XSS vulnerability

v4.3.0 October 24, 2018

Administrator-facing changes:

- Fix bug where compute logging wasn't respecting the `logMaxFiles` key
- Log and display a descriptive error message when there is a problem creating the users index
- Log and display a descriptive error message when there is a problem creating a new user with a duplicated e-mail address when the `uniqueEmail` setting is enabled
- Add footer server pages with server host data (IP, AEN version and server version)
- Fix admin script to change the status of private projects
- Fix validation error when updating/editing an existing resource
- Docs: Add KB article about using MongoDB to update old projects with new Data Center information
- Docs: Add restarting service step to SSO documentation
- Docs: Add support for newer versions of MongoDB
- Docs: Add documentation on `uniqueEmail`
- Docs: Add `projDirsAsHome` key to config docs
- Docs: Rewrite the "Using project directories as home directories" section
- Docs: Add full path to admin commands
- Docs: Warn about upgrading away from tested pkgs
- Docs: Add missing steps to "Authenticating with LDAP" section
- Docs: Add troubleshooting documentation about orphaned projects
- Docs: Warn about not using IP address when you connect to AEN
- Docs: Add an entry about 'Error starting projects' in the troubleshooting page
- Docs: Rewrite "Group and user permissions for NFS" section and description of the `identicalGID` key in the config pages
- Docs: Add a new section about using MRO packages in AEN (Update: MRO was discontinued in 2021)
- Docs: Preserve username capitalization when using LDAP/AD
- Docs: Add umask 0022 to security requirements
- Docs: Add new section about changing install location
- Docs: Add note about how to manually break out Root CA for the gateway
- Docs: Add note about upgrading custom environments
- Docs: Add notes about how to find conda config files inside AEN
- Docs: Add note about using `USE_SERVER_BASED_SESSIONS: false` when configuring SSO between AEN and versions 2.33.3 through 2.33.10 of the Repository

User-facing changes:

- Increase Workbench file upload limit
- Fix Bokeh examples
- Extend `nb_locker` to detect a server disconnection and generate an alert if it occurs
- Docs: Update the notebook app to correctly point to AEN docs

- Docs: Emphasize that permissions are not applied recursively in the workbench

Internal fixes:

- Update Nginx version to v1.12.2
- Remove unused server config file during the compute upgrade process
- Remove already defined compute default settings from the post-script step
- Pin widgetsnbextension version to prevent version mismatch issue (ipywidgets)
- Remove `--offline` flag from the conda clone operations
- Support MongoDB 3.4.14 and update pymongo to version 3.2.2
- Fix LDAP username case sensitivity
- Security fixes and enhancements

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs
- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7
- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date
- Server: Fix bug Monitor Report blank

- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected "ca" key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes
- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace 'wakari' wording
- New config option to move the user's home directory into the user's project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user's home directory into the user's project directory
- Package cache was moved from user's home directory into the user's project directory
- Change wakari logos to Anaconda logos
- Fix error for deleting tags to work

- Define shell prompt in `.projectrc` template
- Replace 'wakari' wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile
- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application
- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove "wakari" word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair "Create Account" link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating
- Compute resource: Show full path to log file

- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes
- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation
- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089
- Added support for all-numeric usernames

- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher
- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.
- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes

- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Previous versions

Documentation for previous versions of AEN is provided for users who have not yet upgraded to the latest version. See the sidebar for links to other documentation versions.

Anaconda Enterprise 4 Notebooks

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.3.1, released March 25, 2019.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

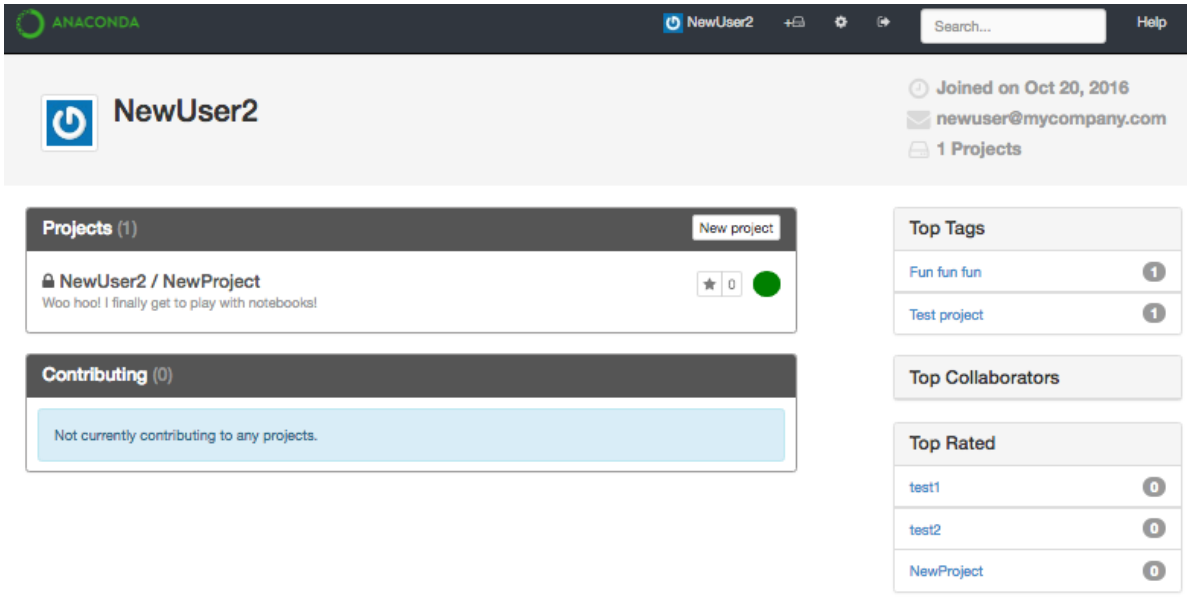
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

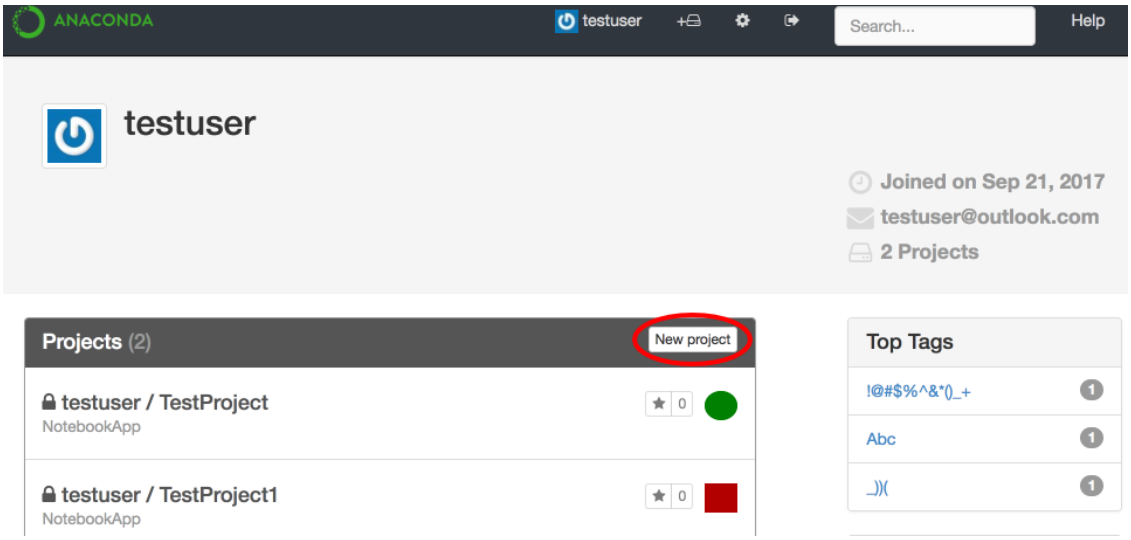
   Your user home page, where all good things happen, is displayed:



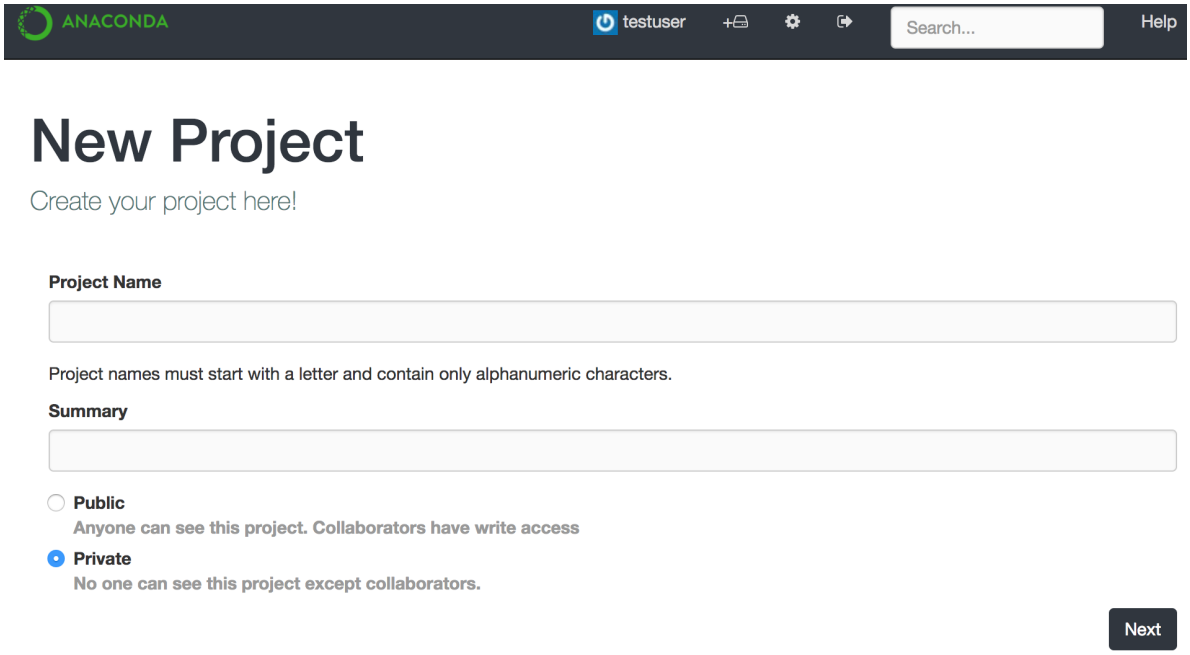
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as “Testing.”

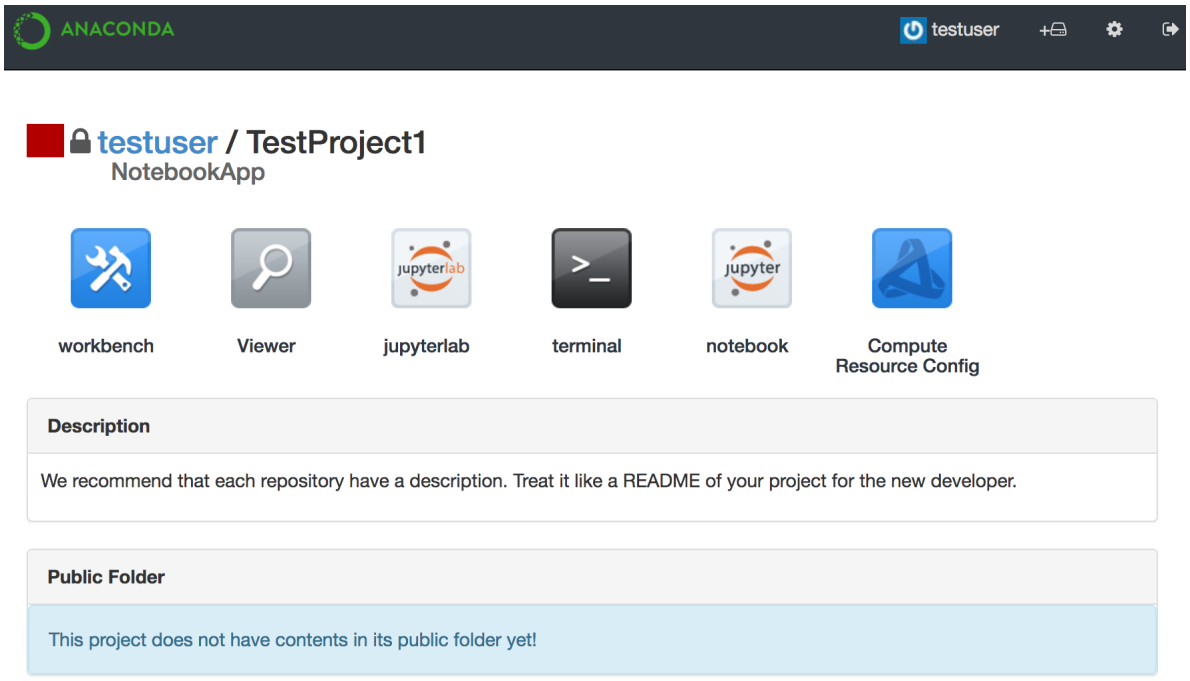


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

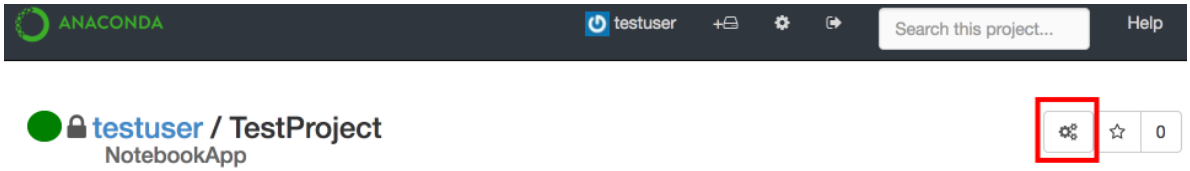
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

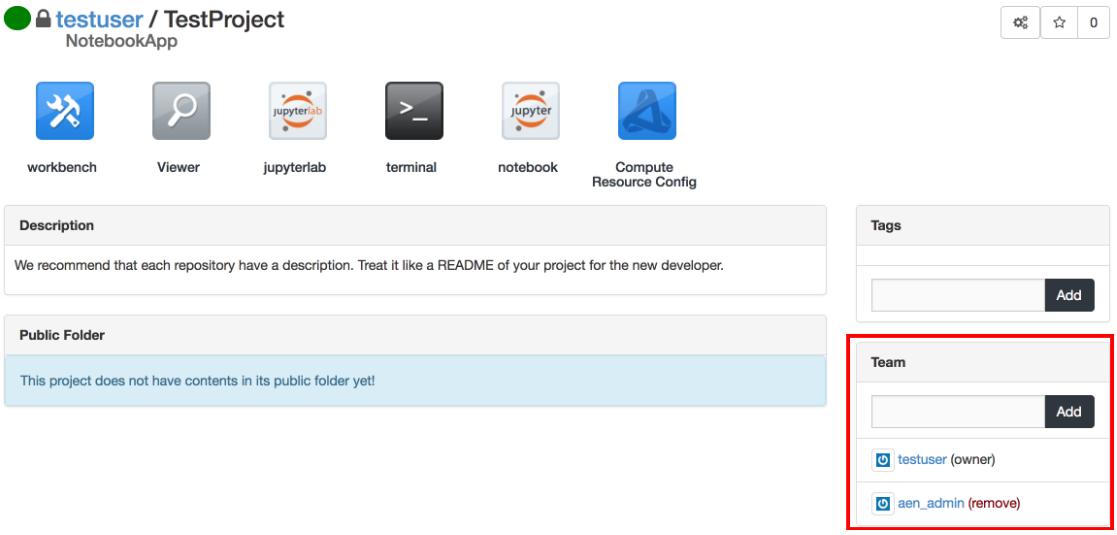
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

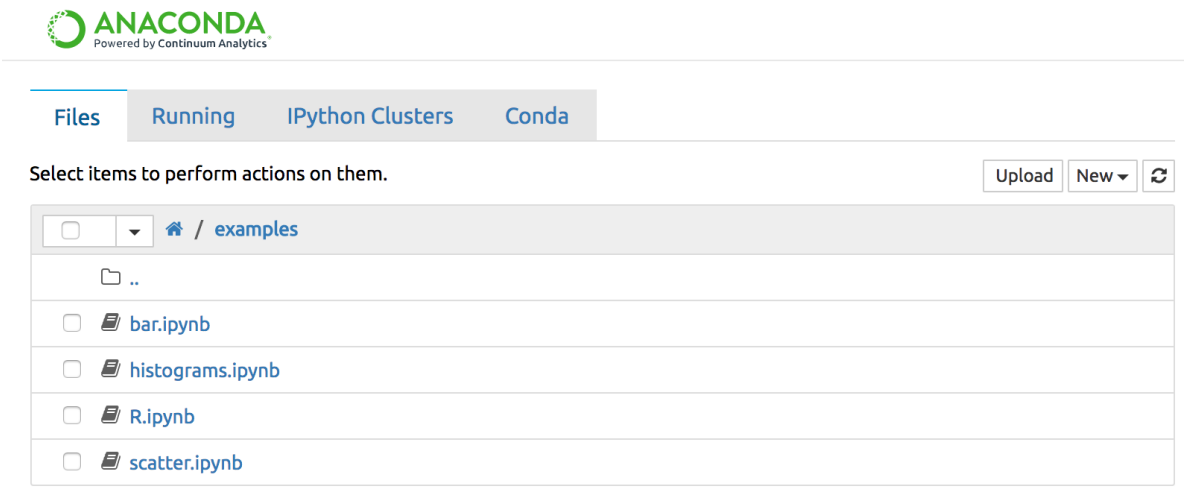


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

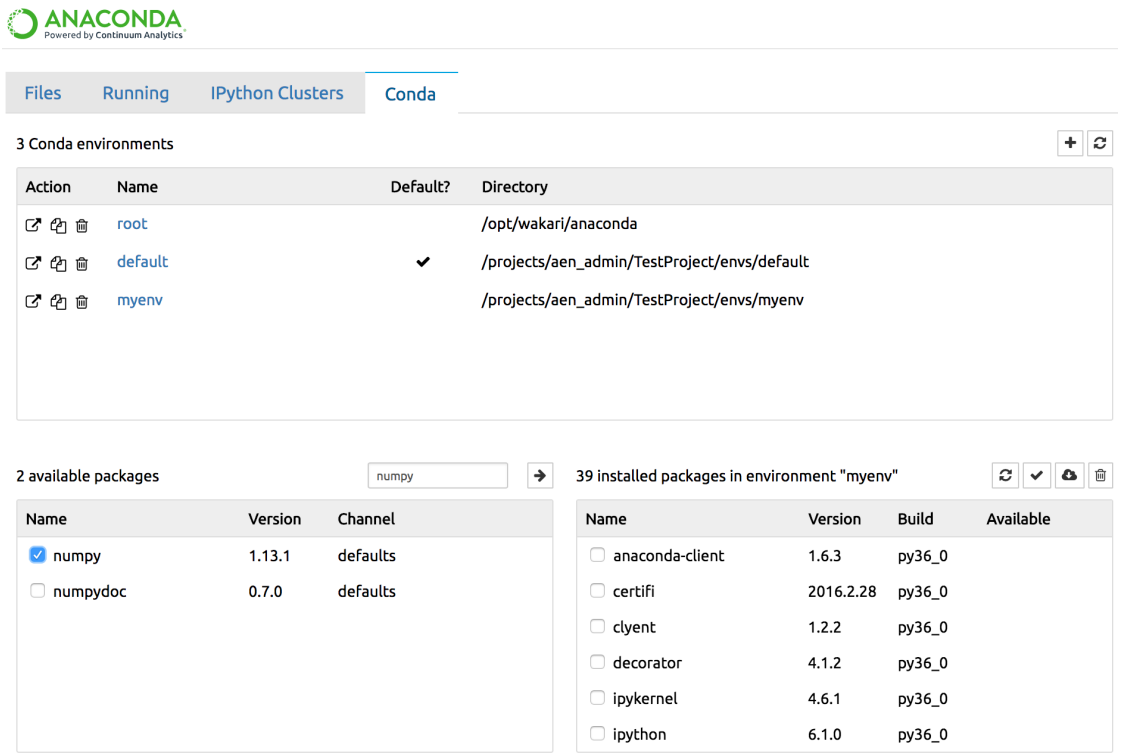
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



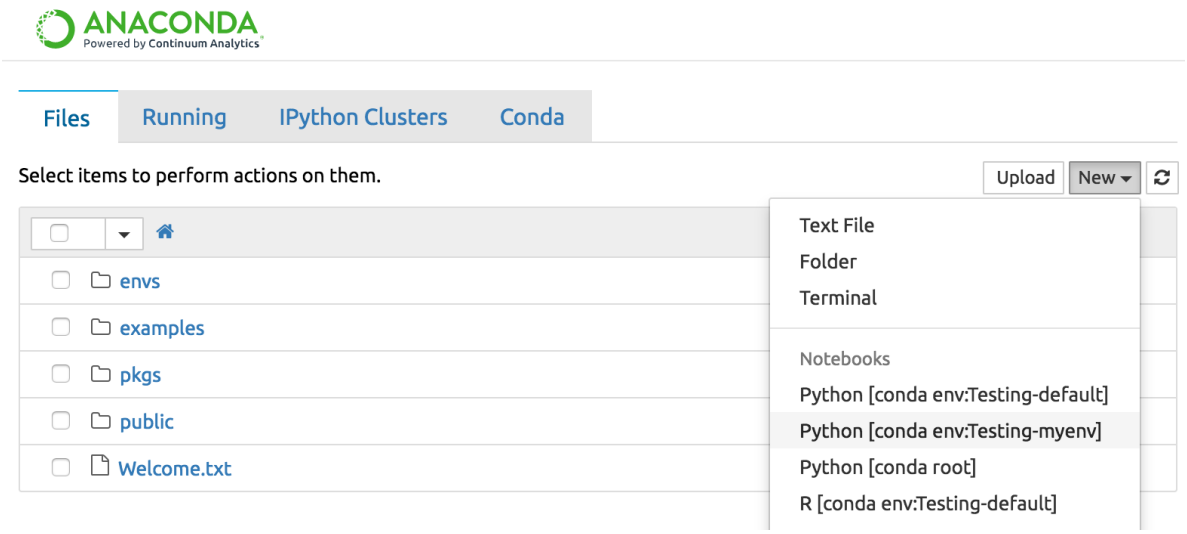
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



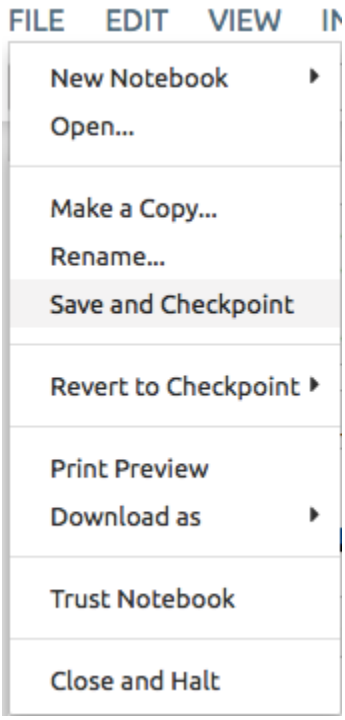
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

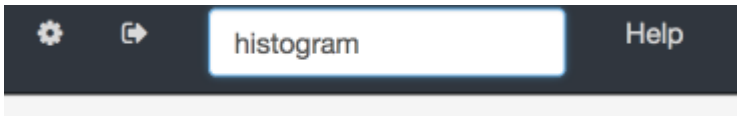
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

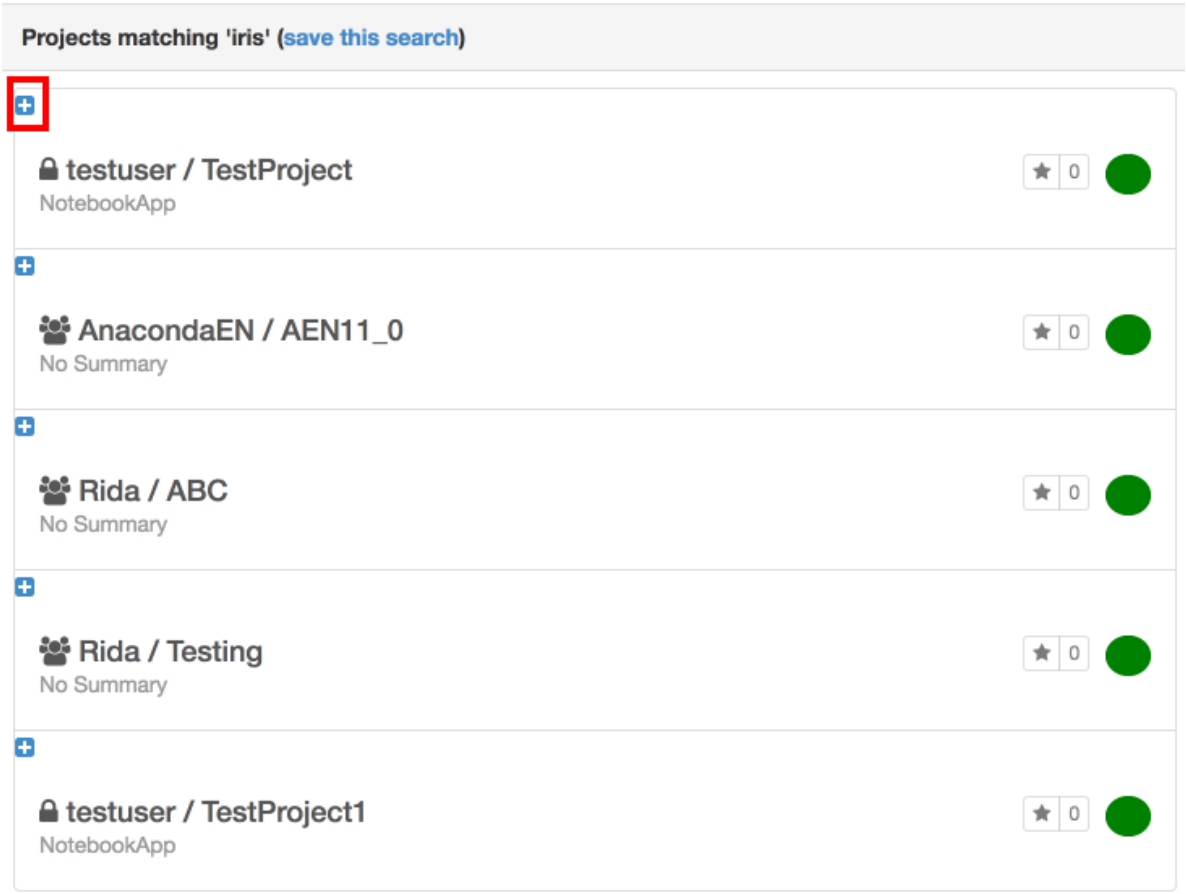
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

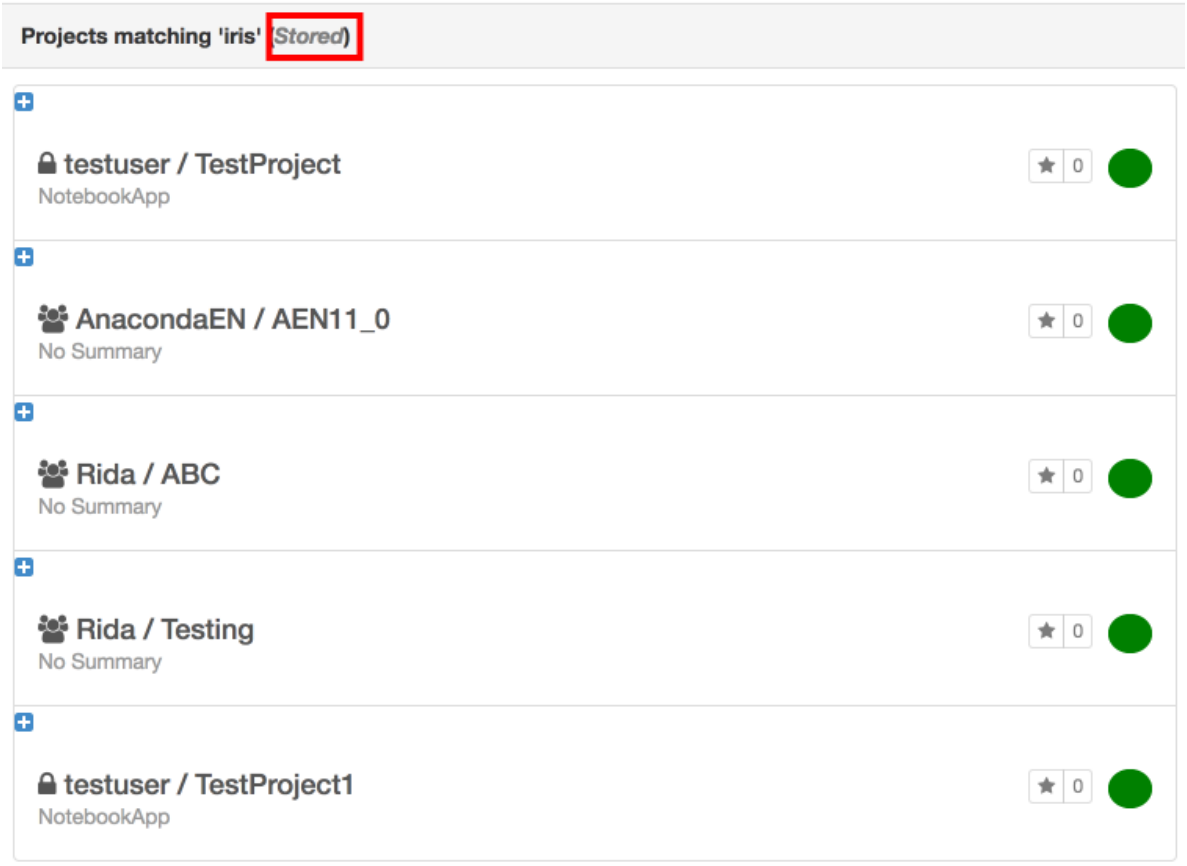


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

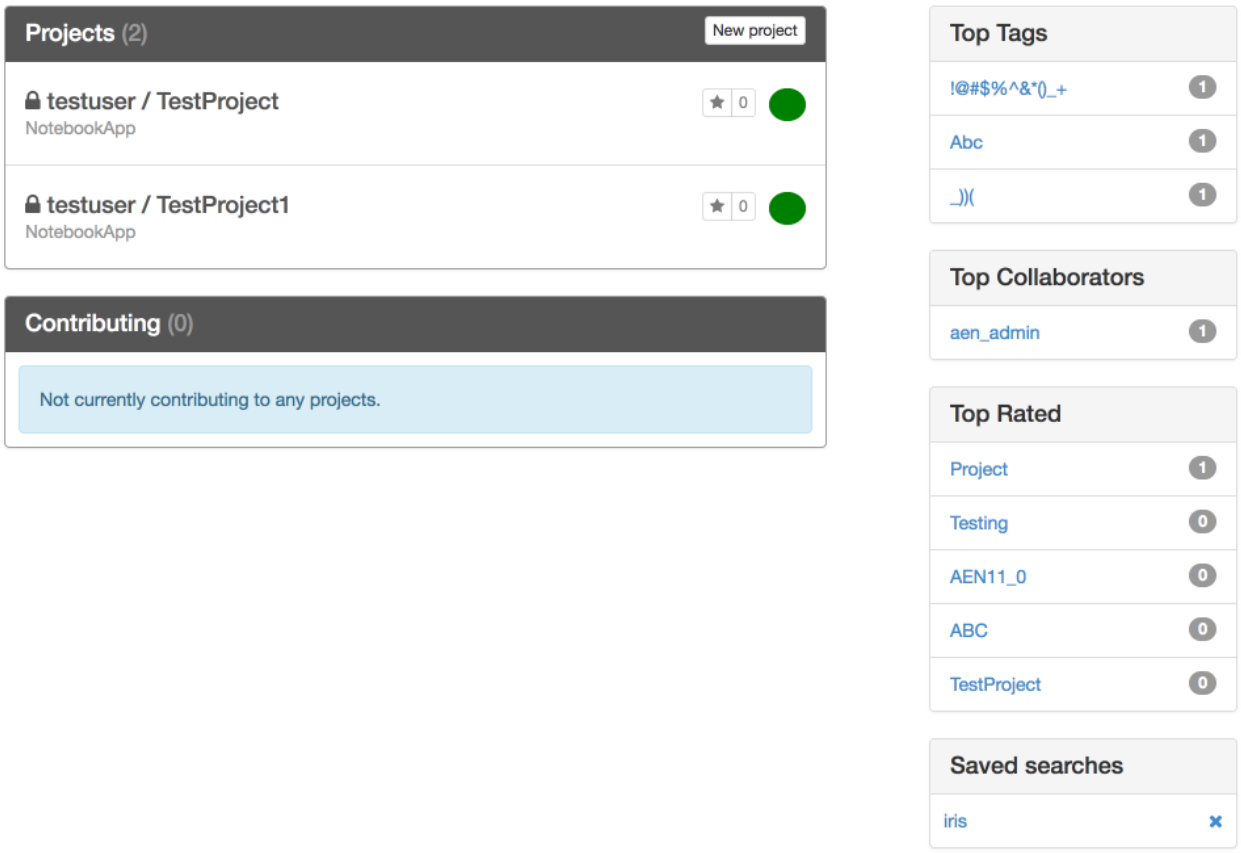
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

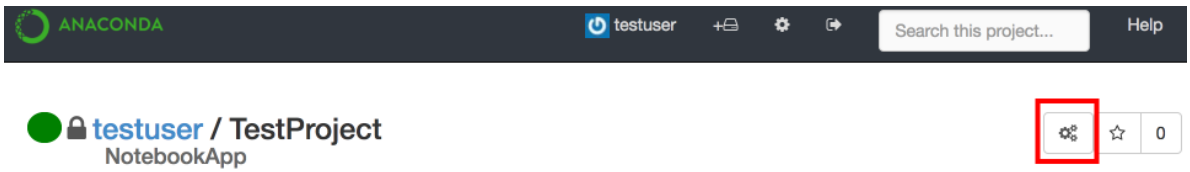
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:

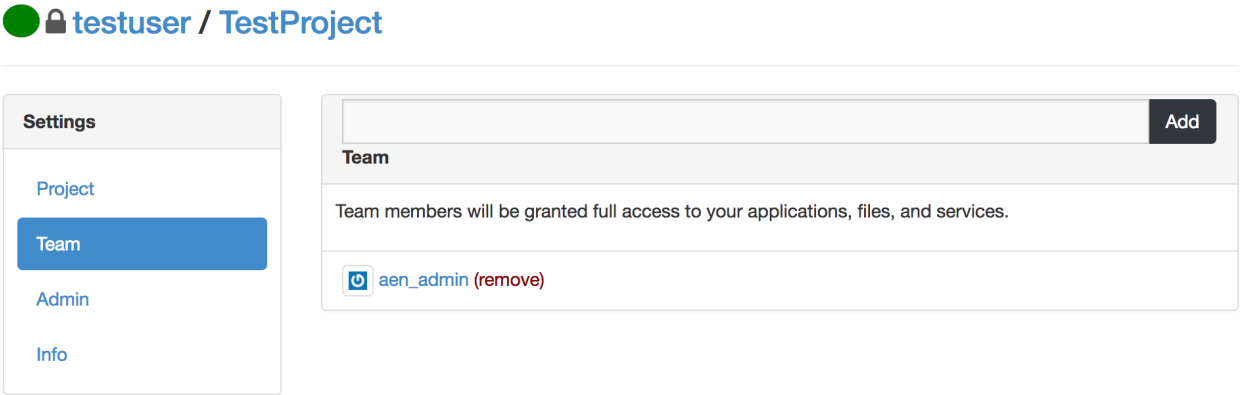


Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.



Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

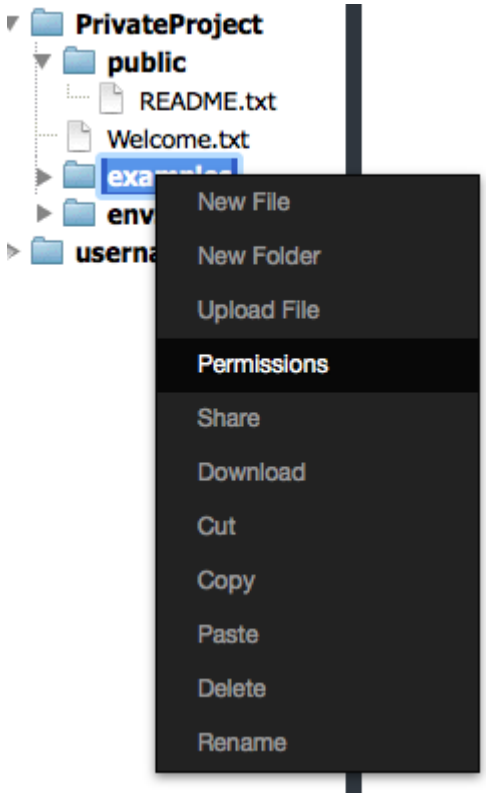
By default, all of the team members on a project have read and write access permissions for all project assets.

The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

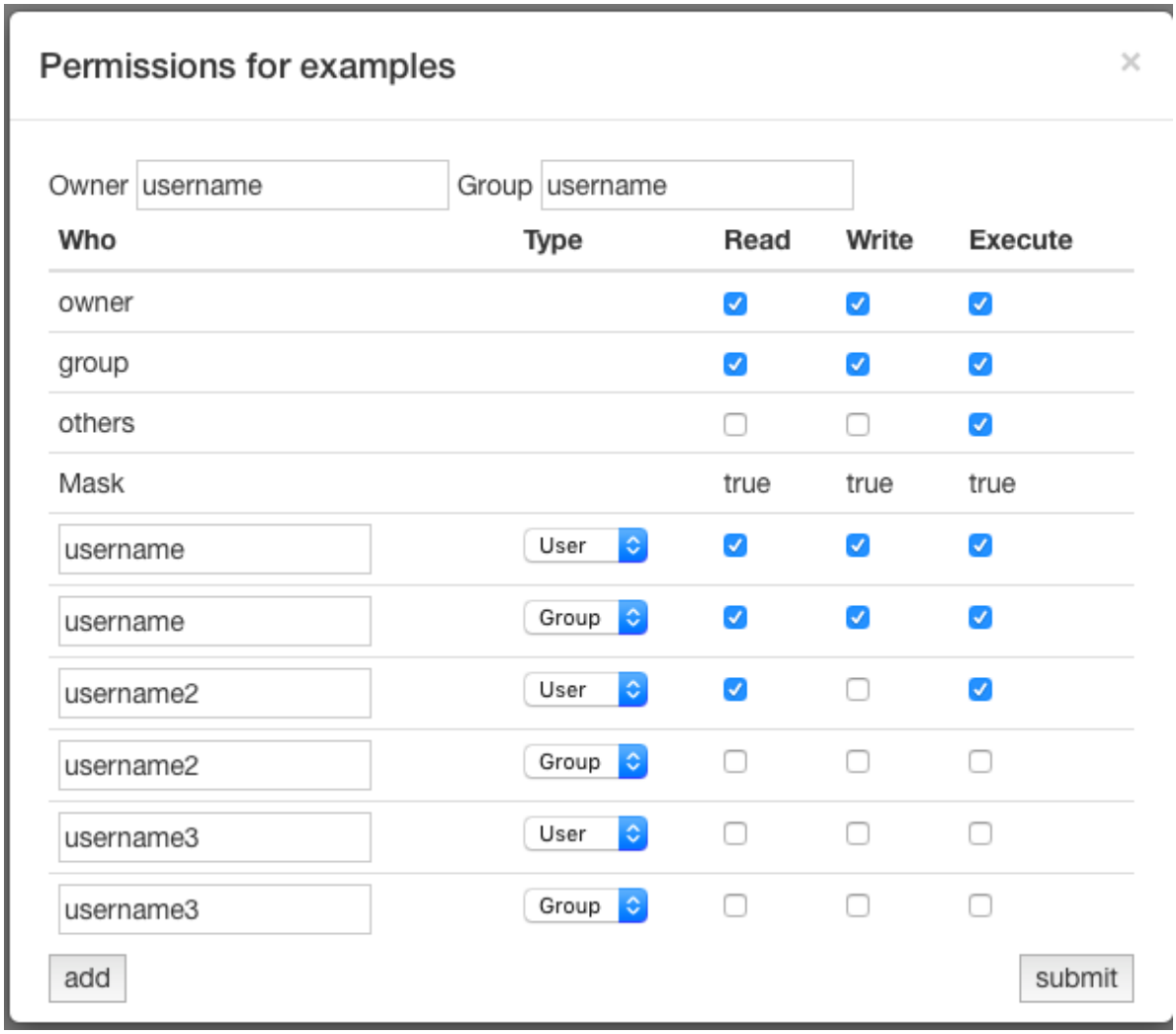
1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.
4. In the menu that displays, select Permissions:



A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

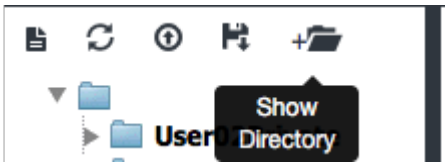
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

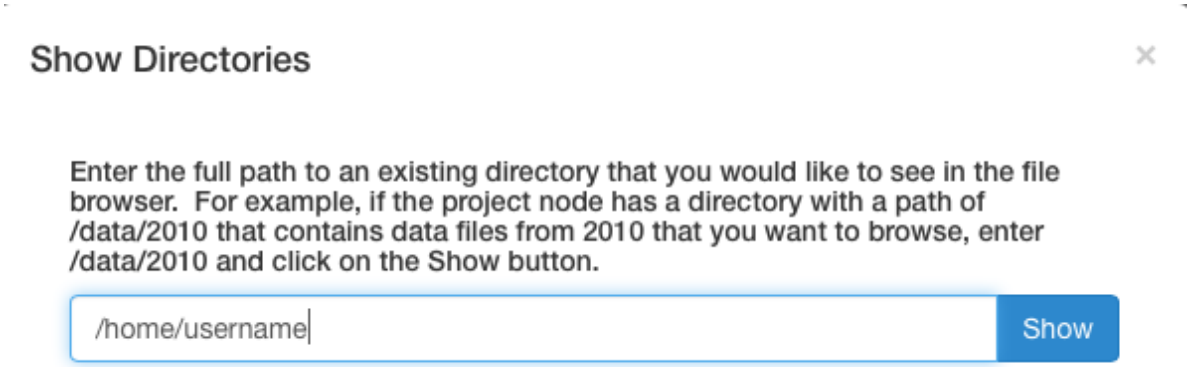
1. Click the Show Directory button at the top of the Workbench File Manager:



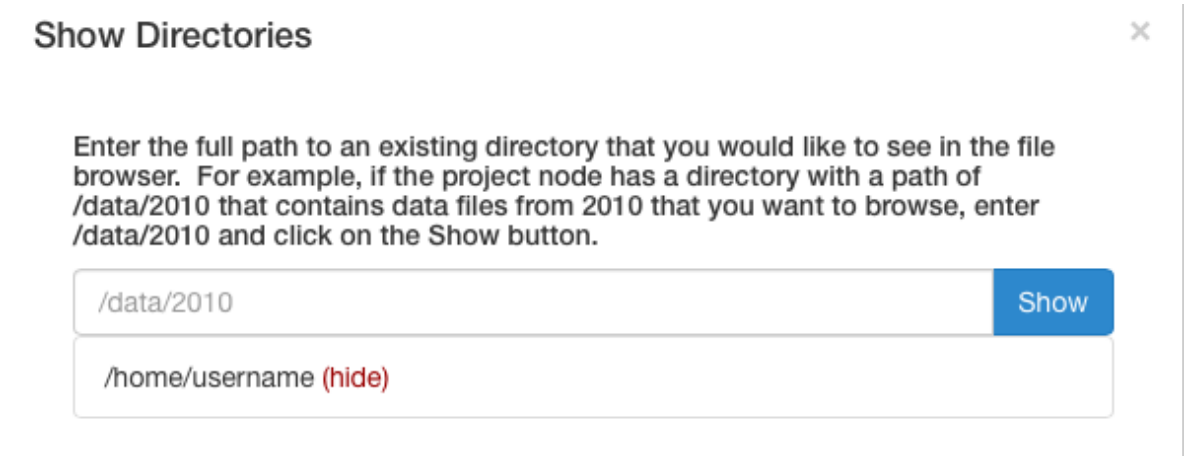
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.

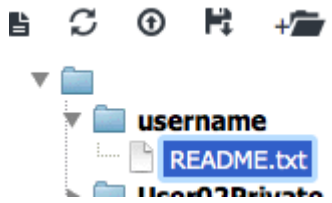


3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

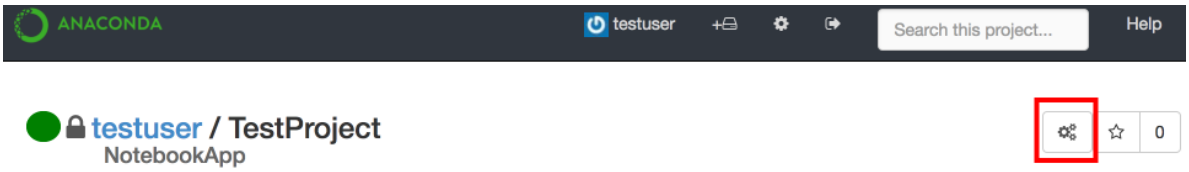
   The shared file is displayed in the File Manager:



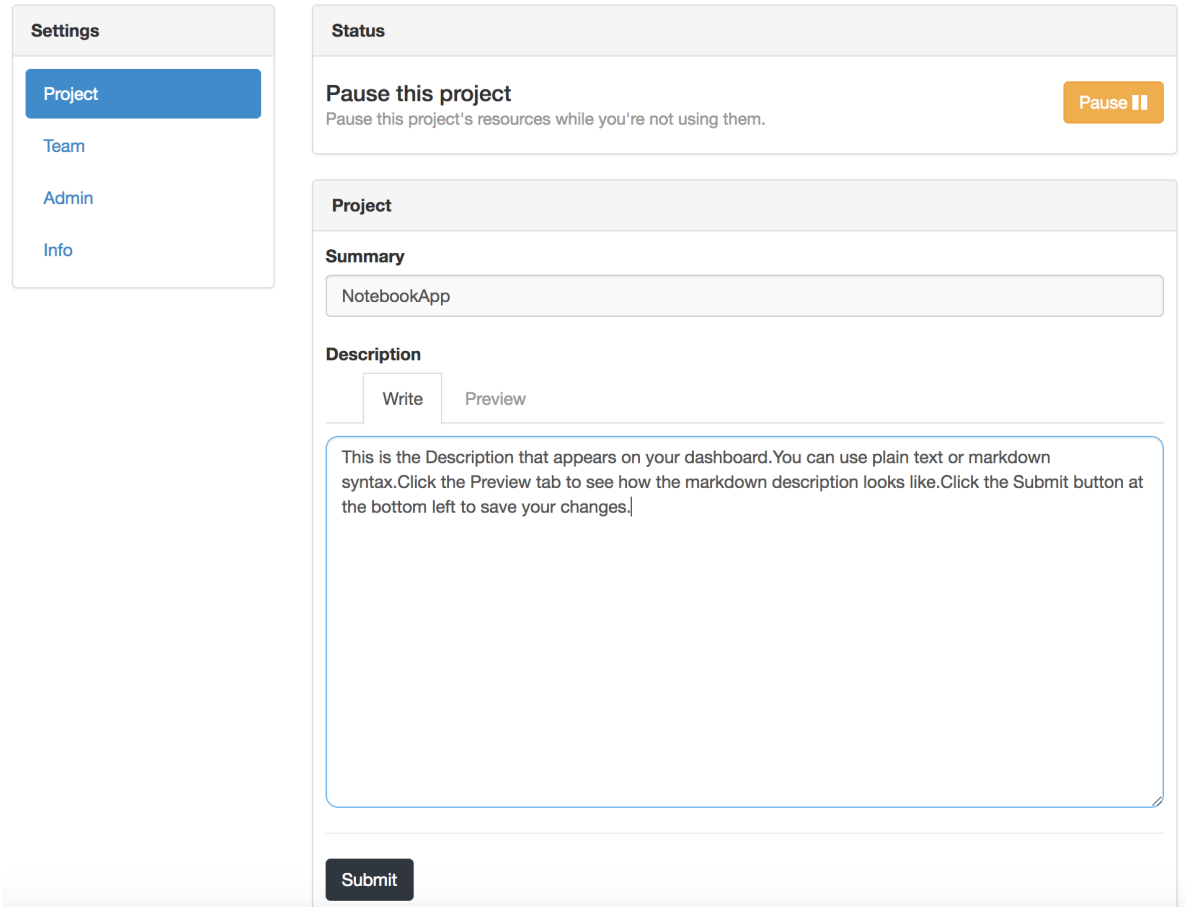
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



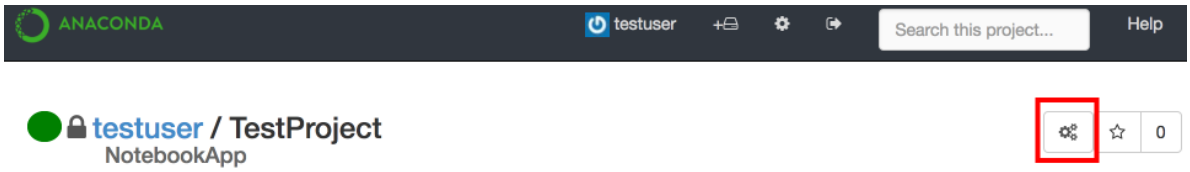
2. In the **Settings** menu, select Project.



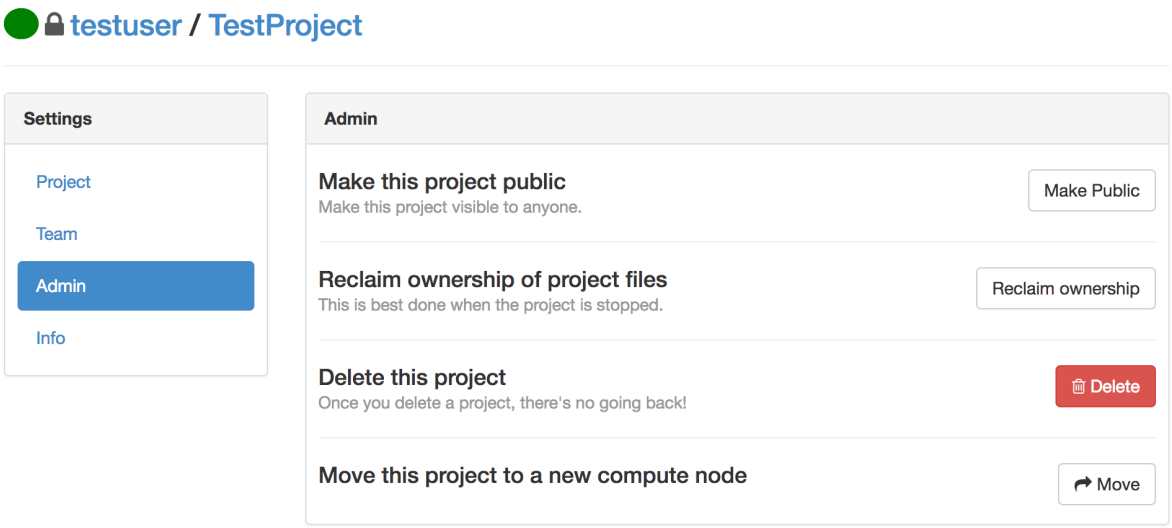
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



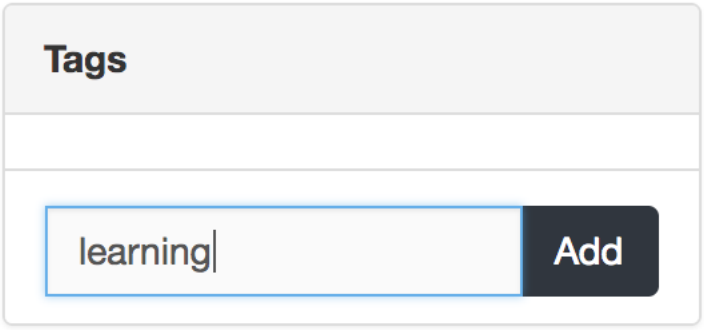
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

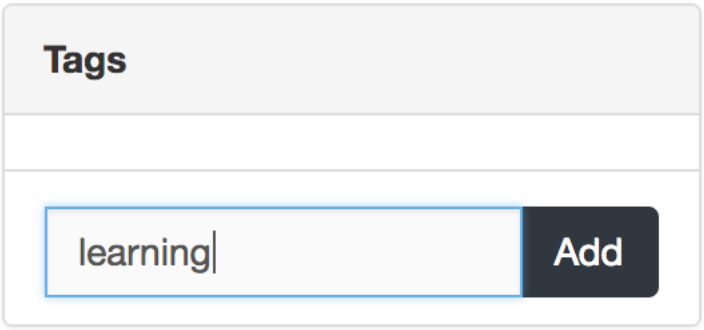
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

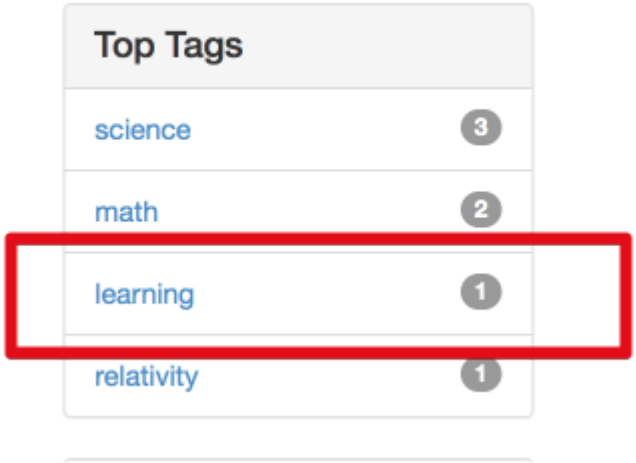


2. Click the Add button.

   The new tag is added to the Tags list:

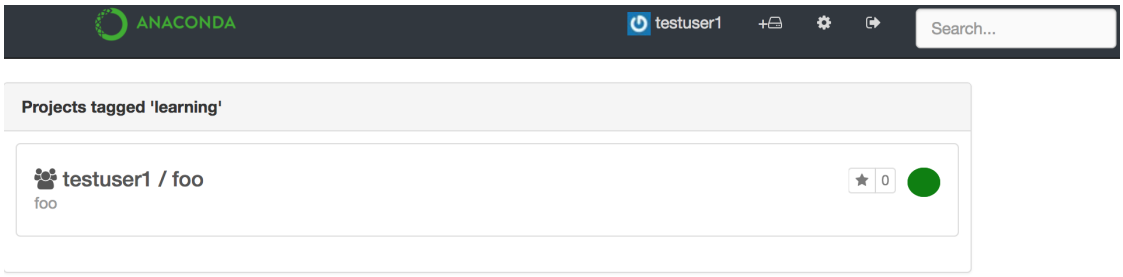


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



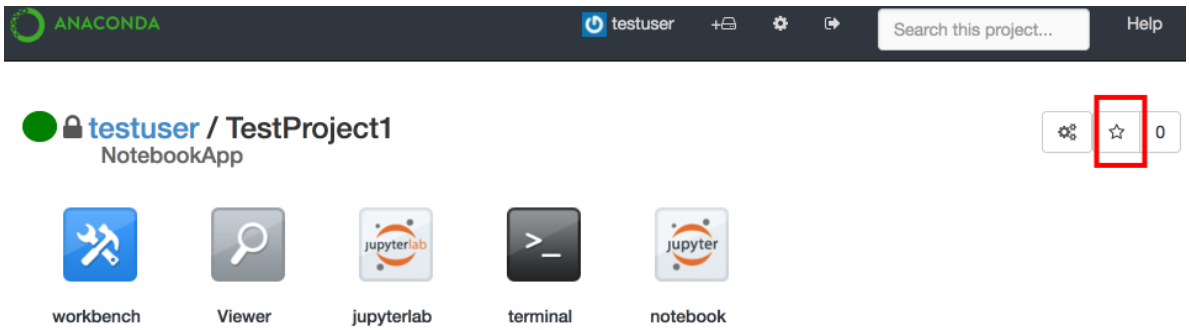
1. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

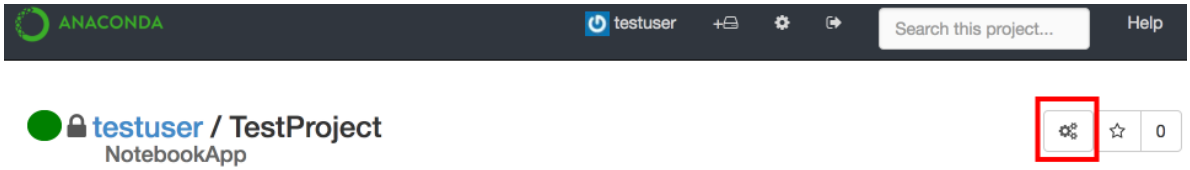


3. To unstar a project, click the Star icon again.

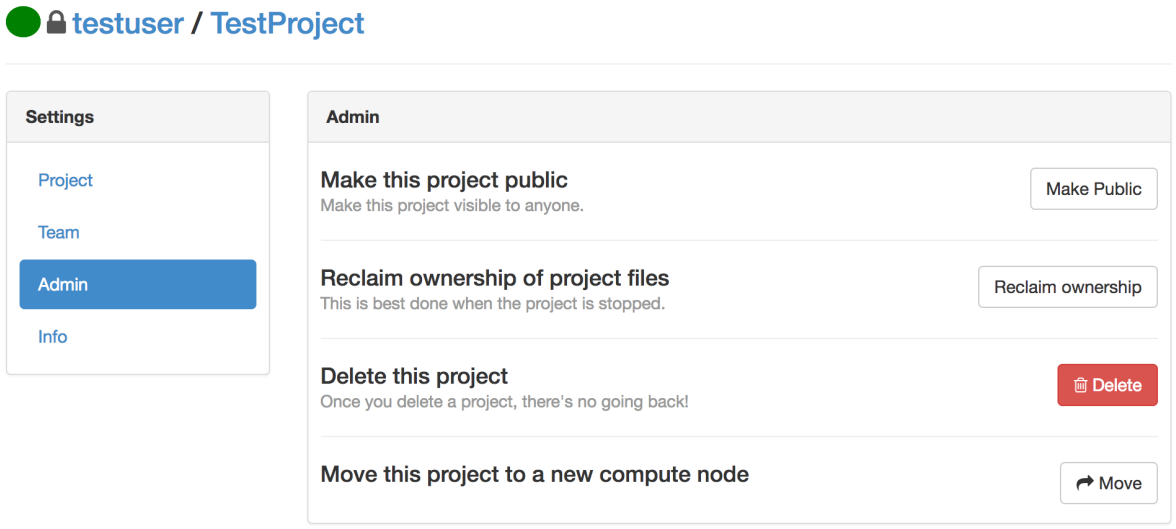
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



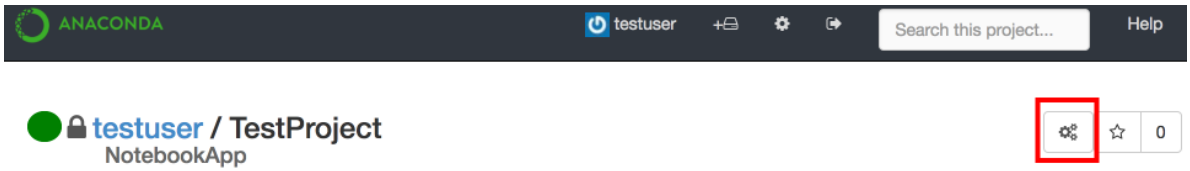
3. In the **Settings** menu, select Admin.



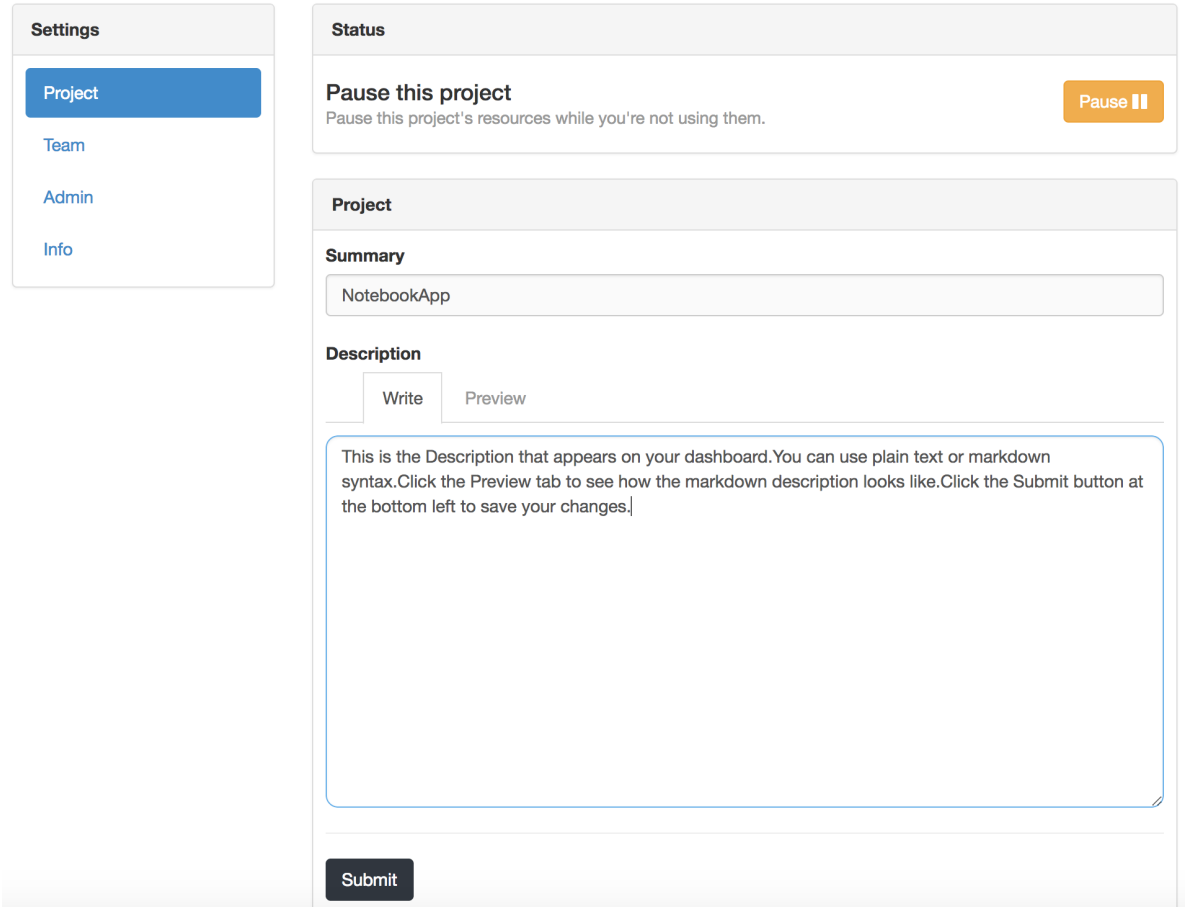
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



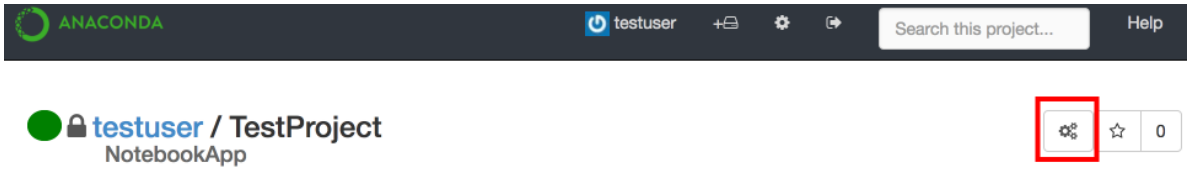
2. In the **Settings** menu, select Project.



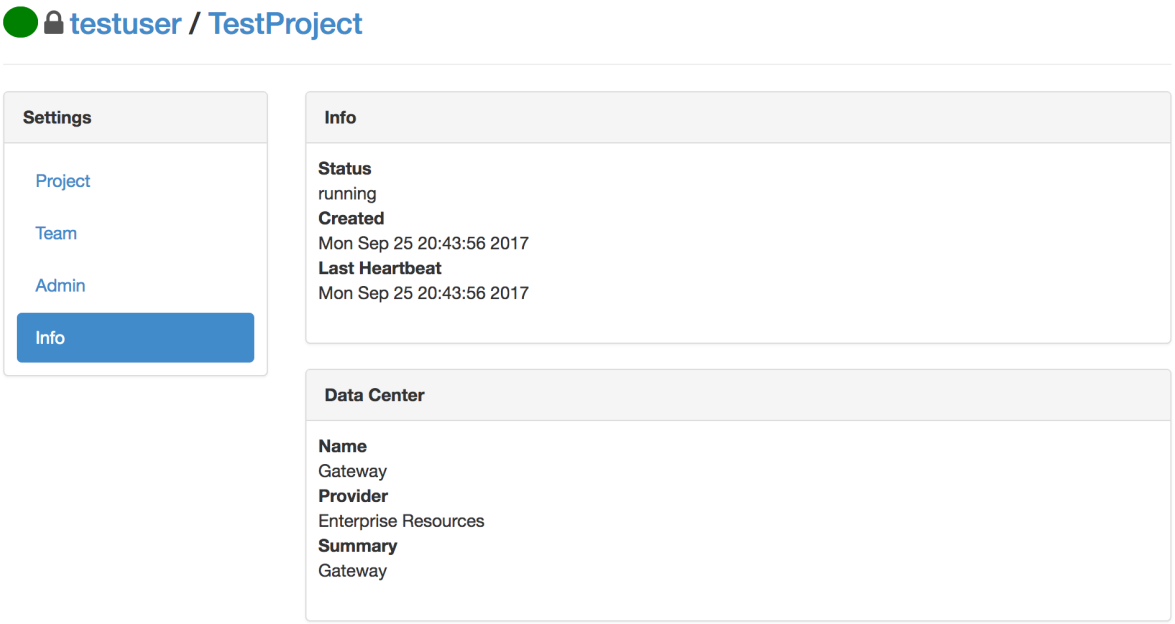
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

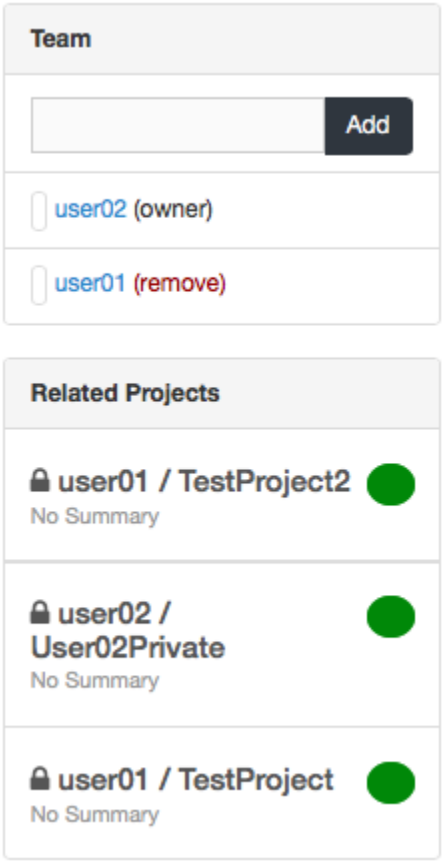


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

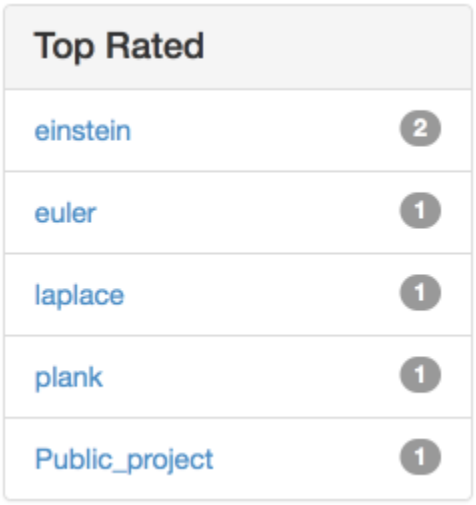
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

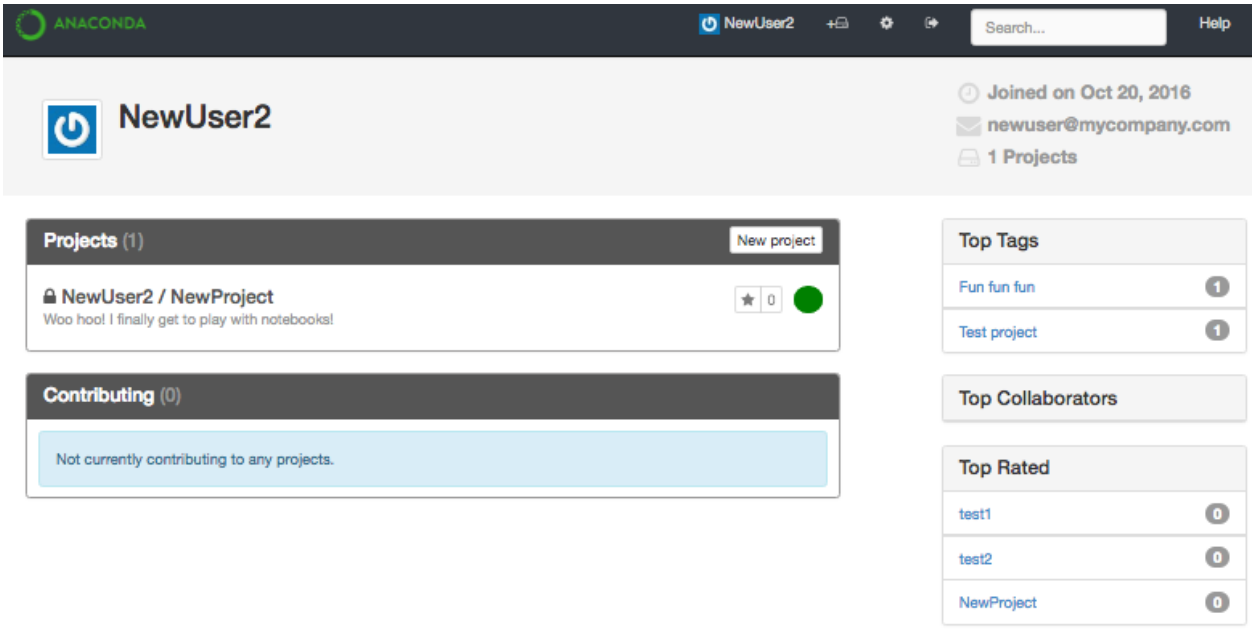


The number next to a project represents the number of stars that have been given to that project.

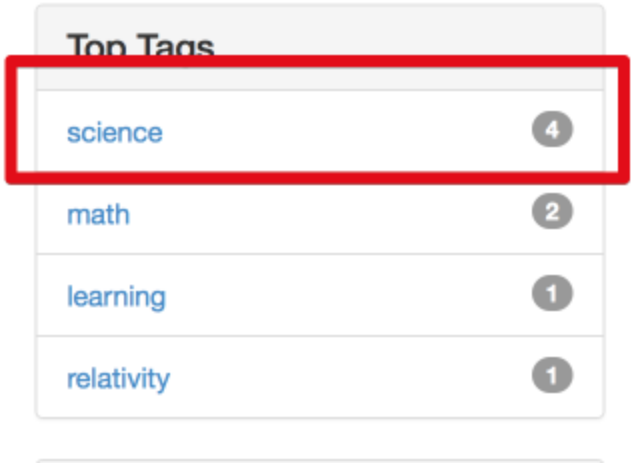
Click a project name to view the project's home page.

Using tags to find a project

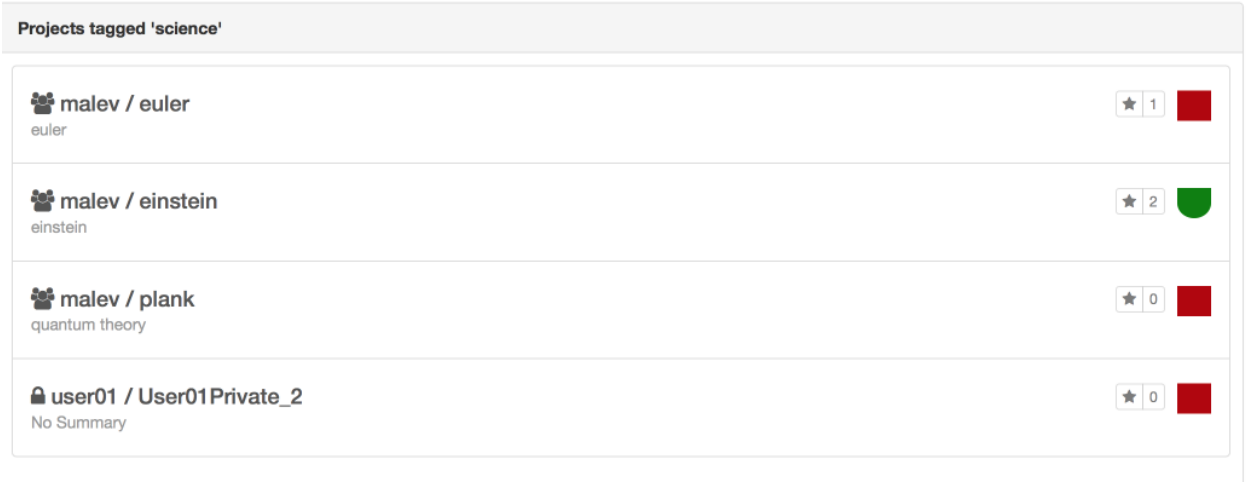
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

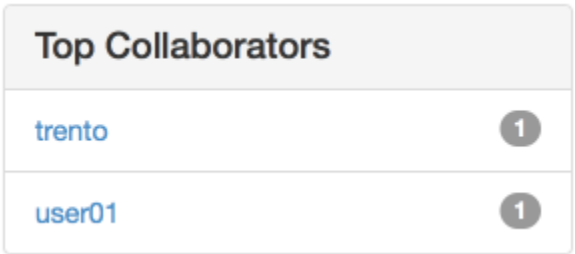


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

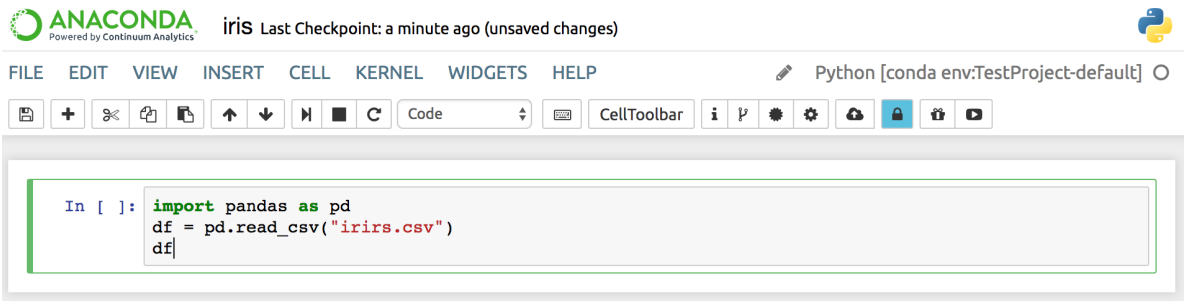
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

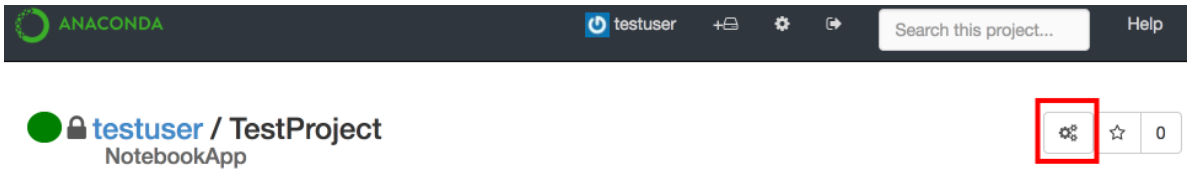
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

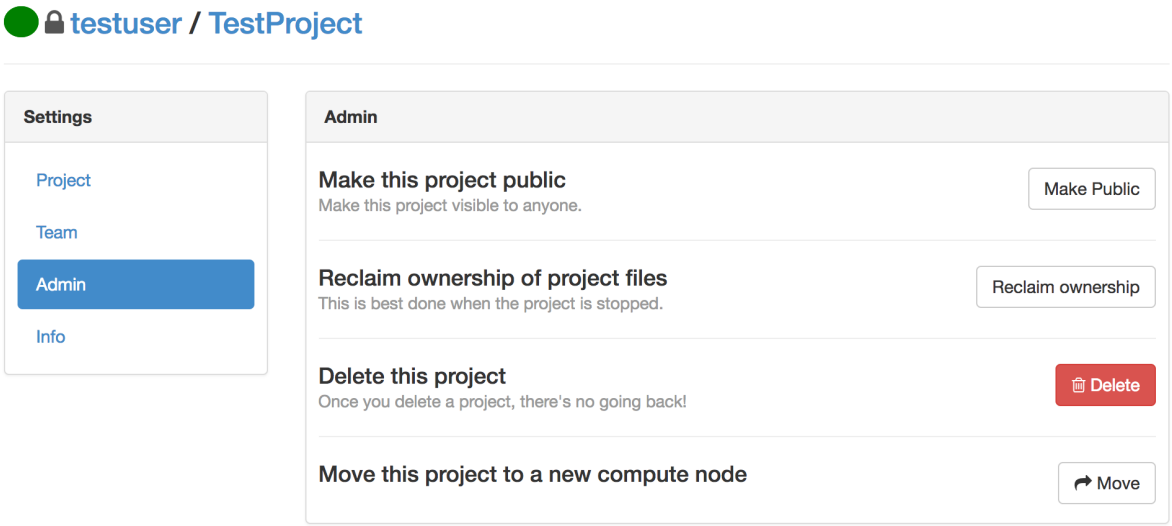
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



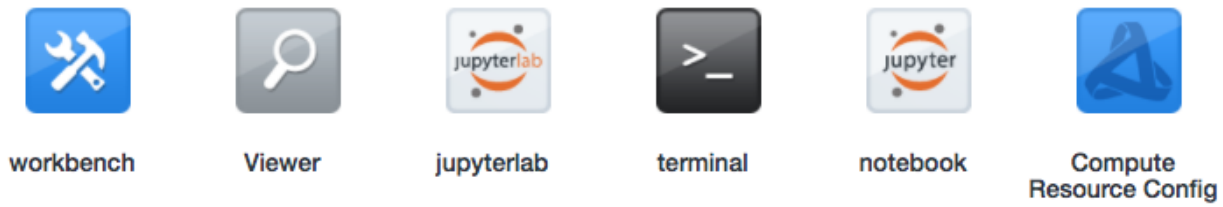
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Using Workbench

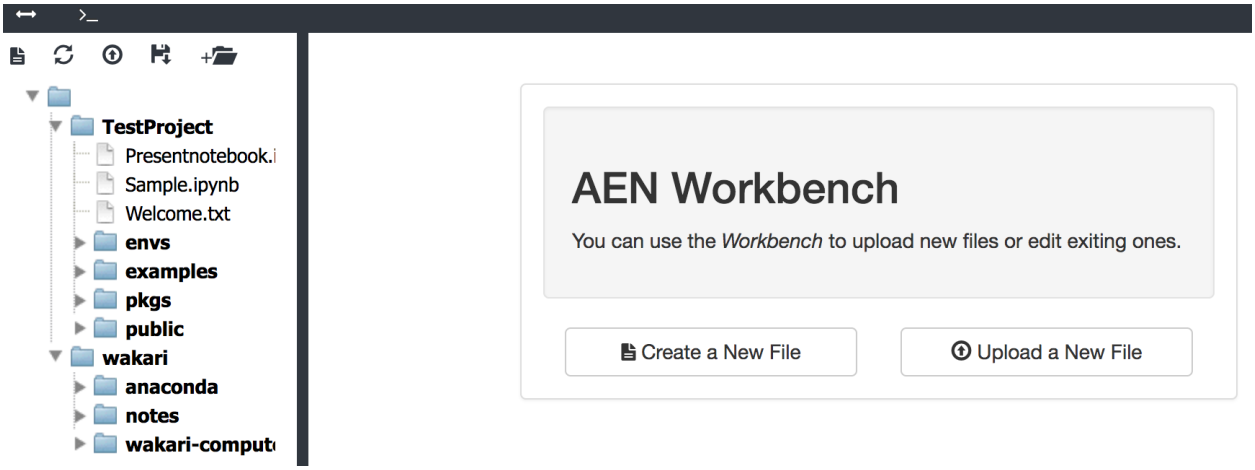
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.
- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

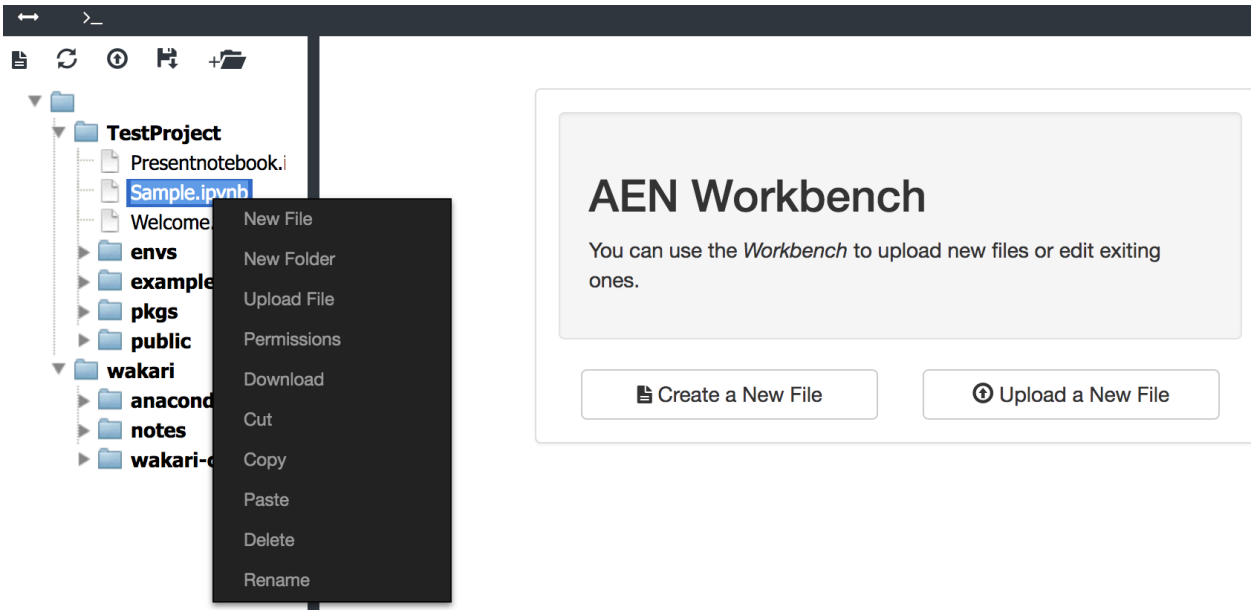
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

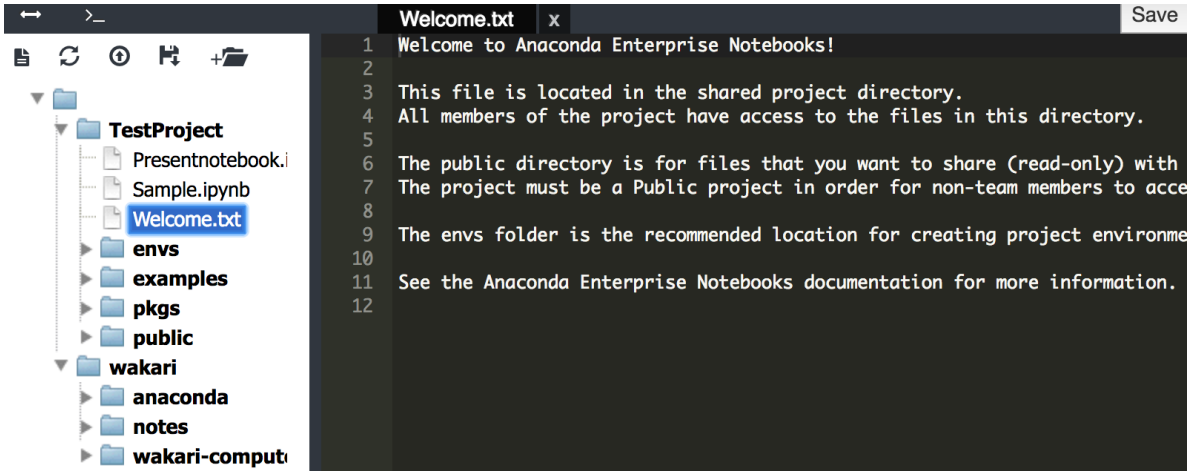
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

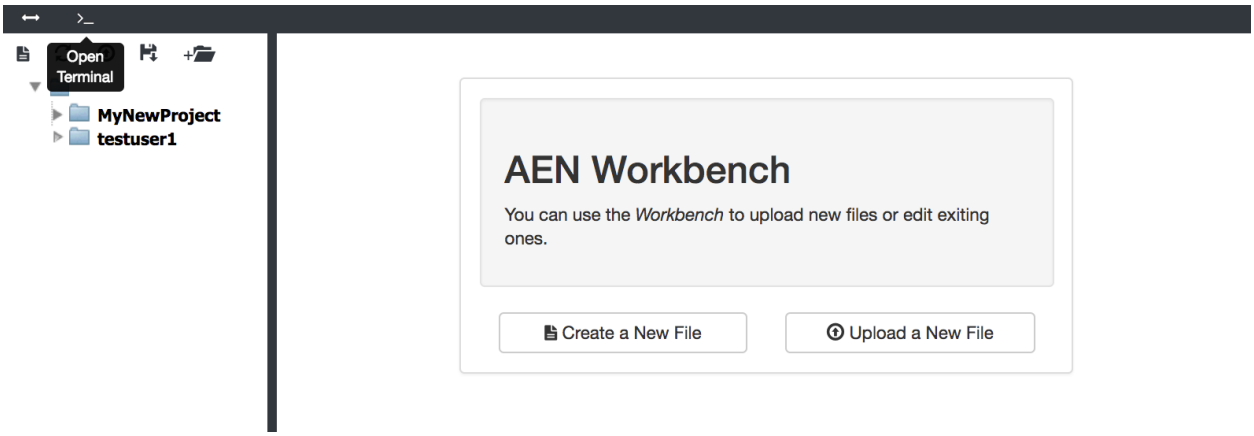


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

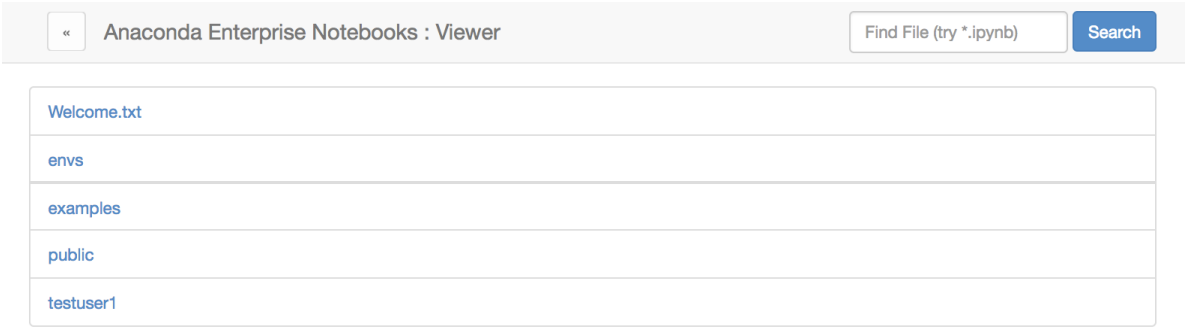
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

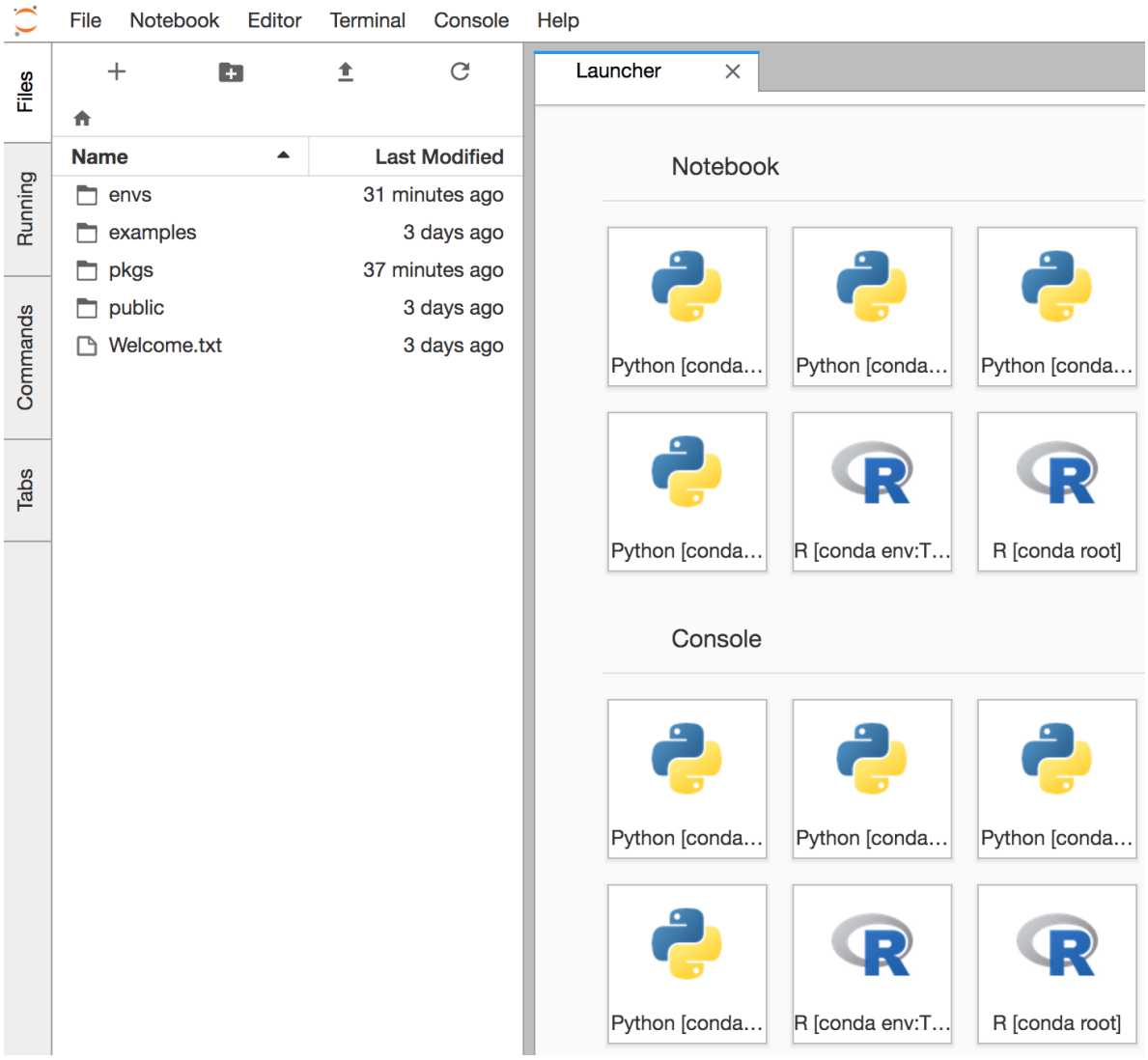
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:



Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:

```
+ 1                                                                    bash
(/projects/aen_admin/TestProject/envs/default) ls
envs  examples  pkgs  Presentnotebook.ipynb  public  Sample.ipynb  Welcome
(/projects/aen_admin/TestProject/envs/default)
```

Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

Terminal opens the project directory in a new browser window.

By default, the project directory is `/projects/username/project-name`.

EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

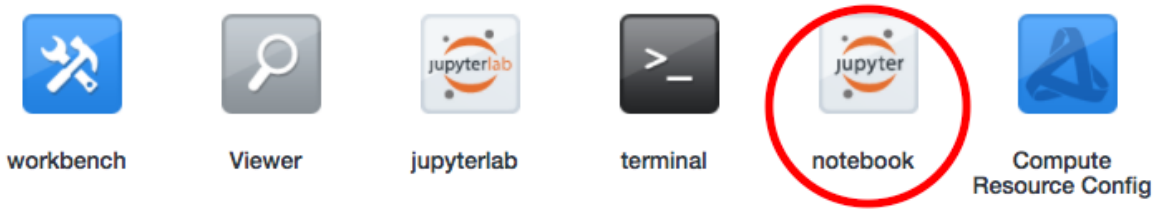
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

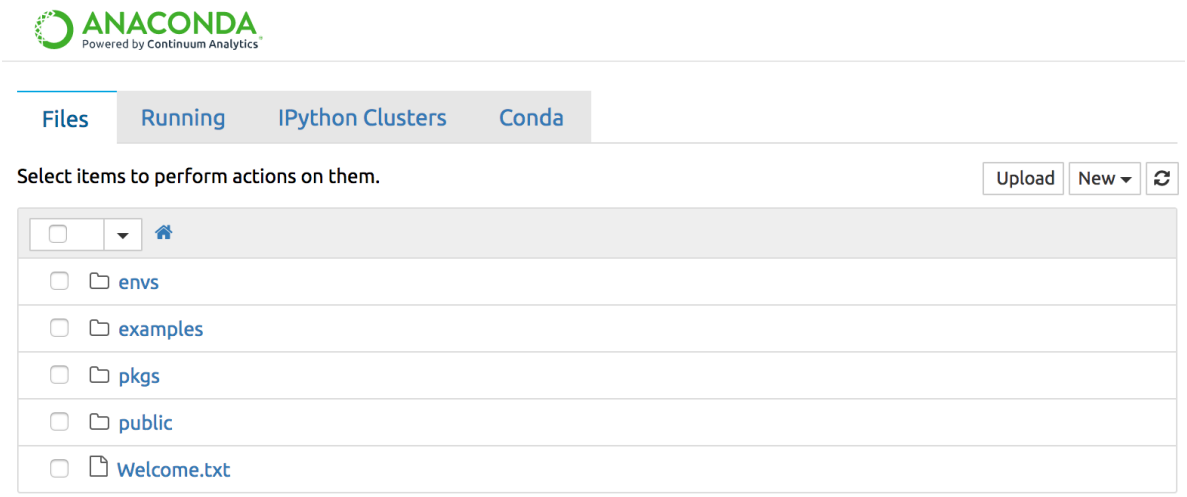
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

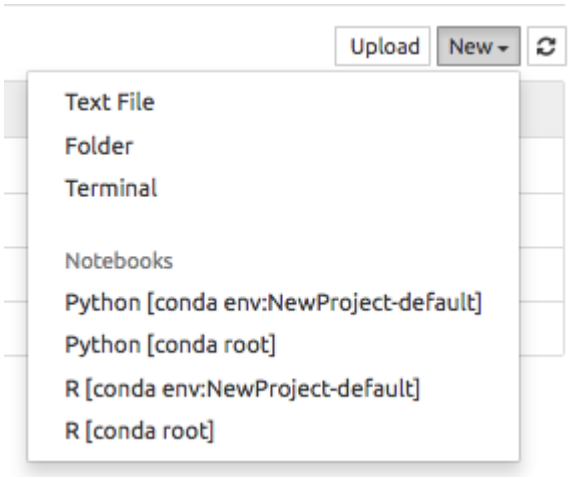
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

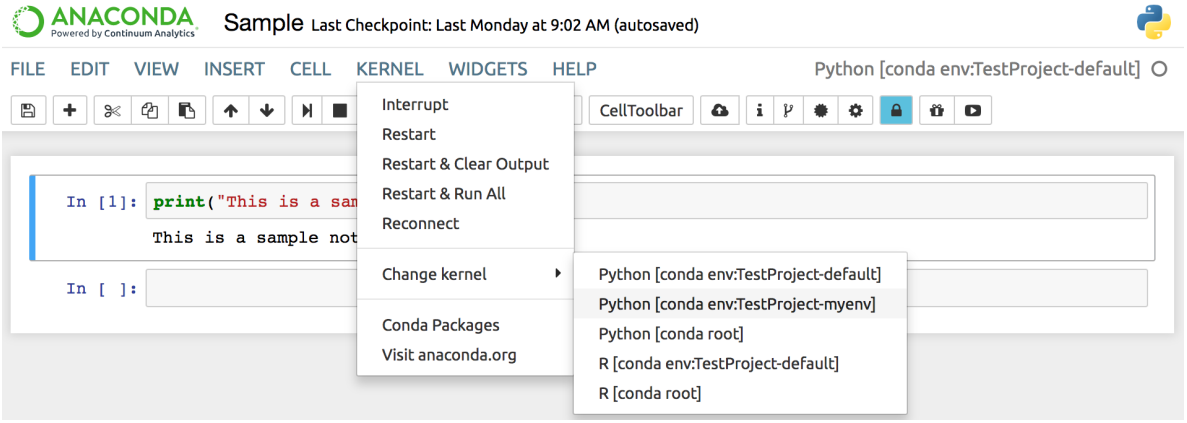
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. To prevent merge conflicts, this model uses a "latest wins" policy as its main merging strategy.

The RCM Jupyter Notebook extension adds four buttons:

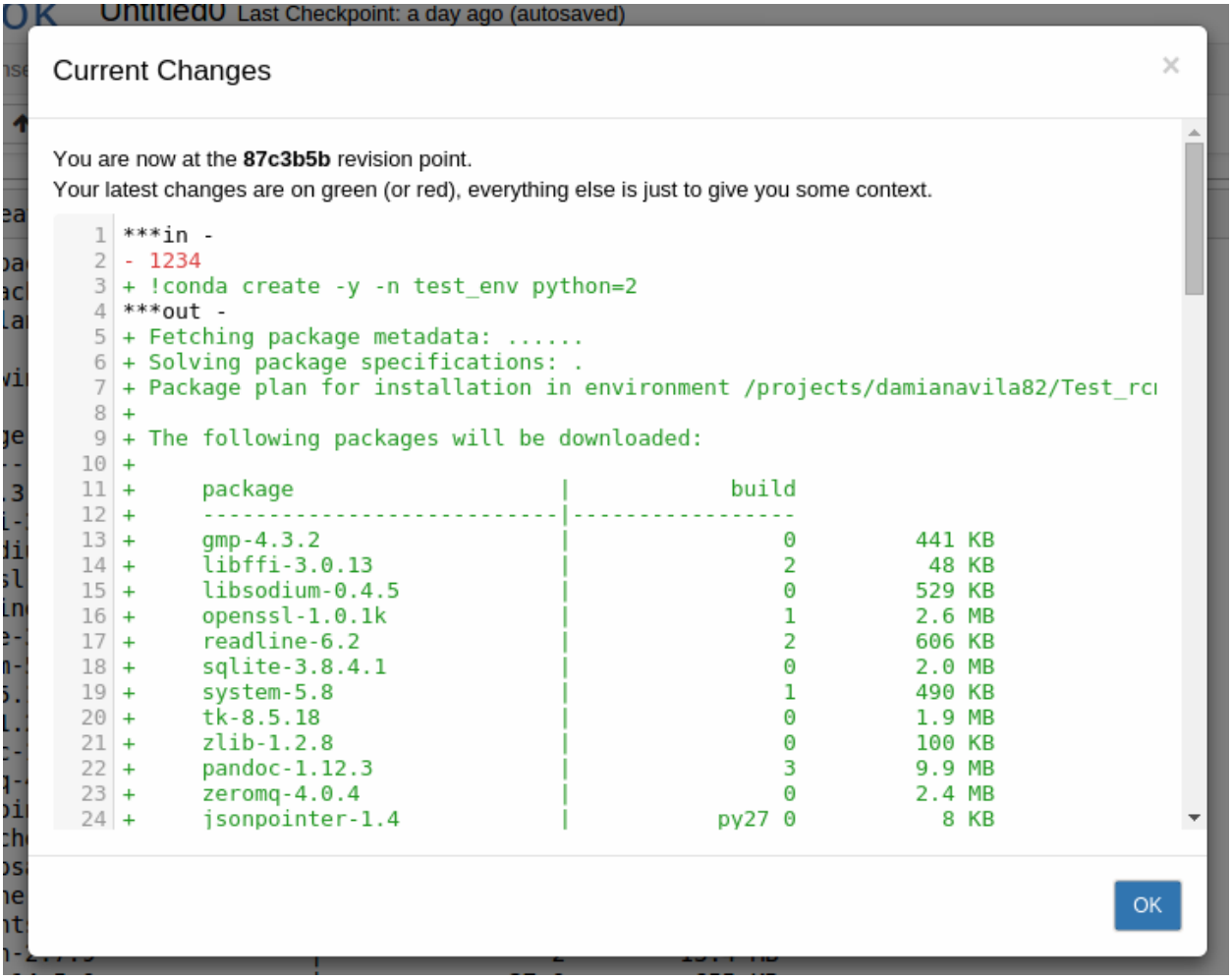
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

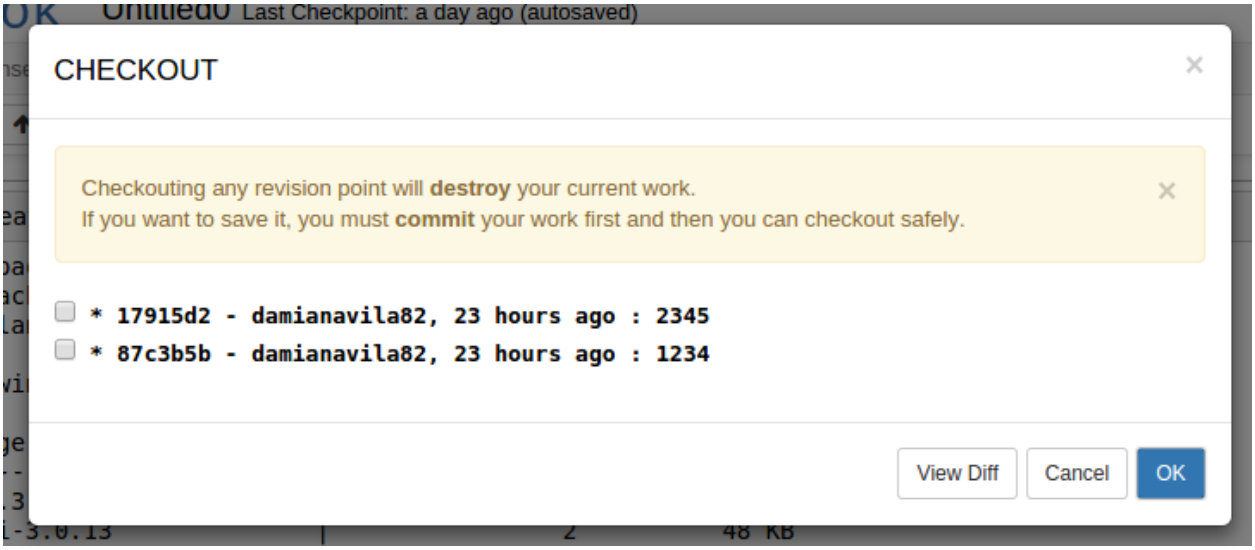
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

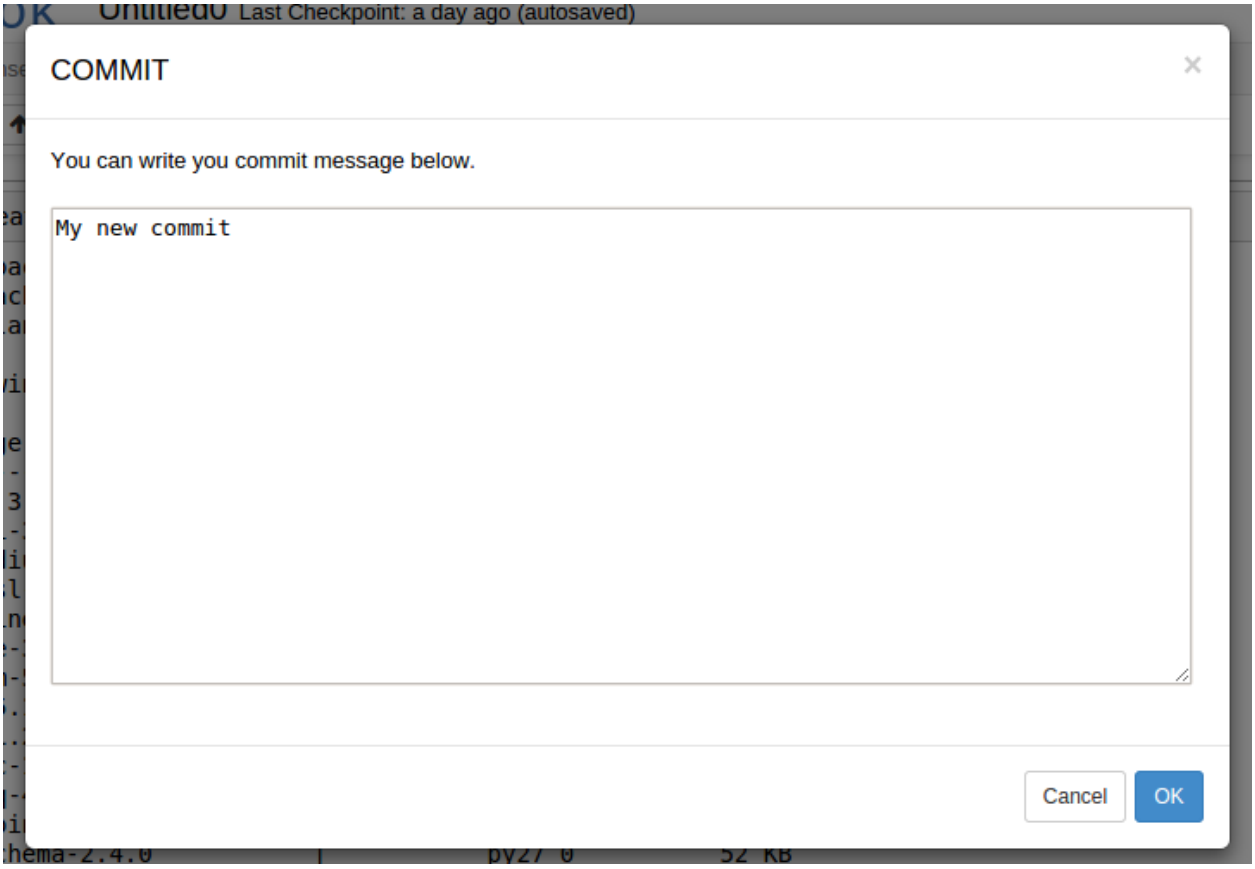
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

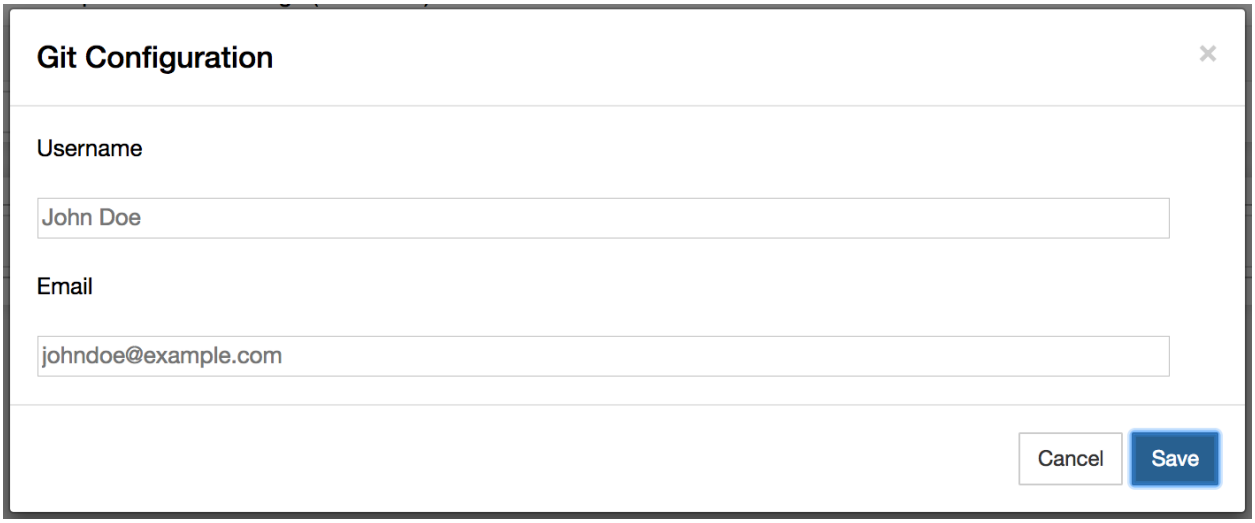
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

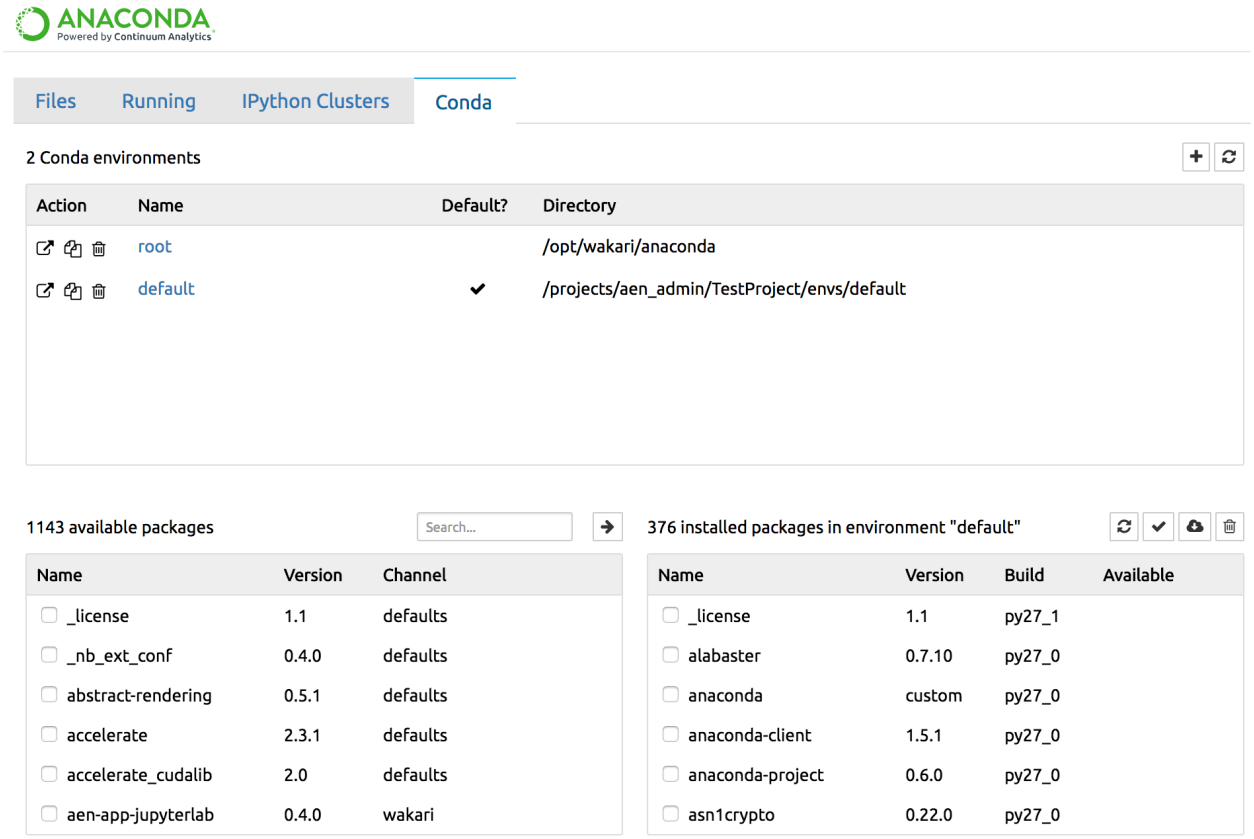
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

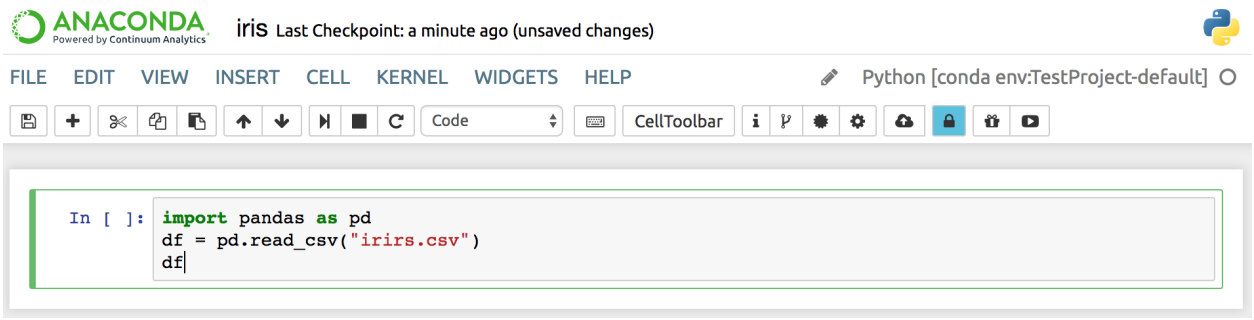
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

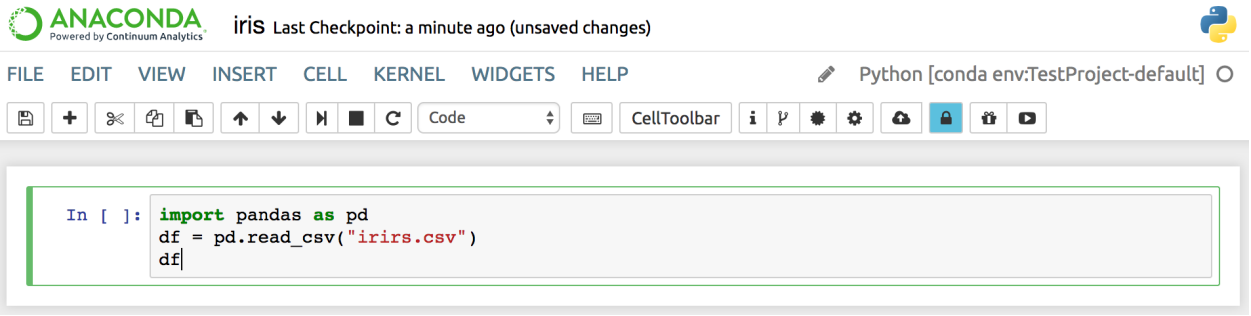
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

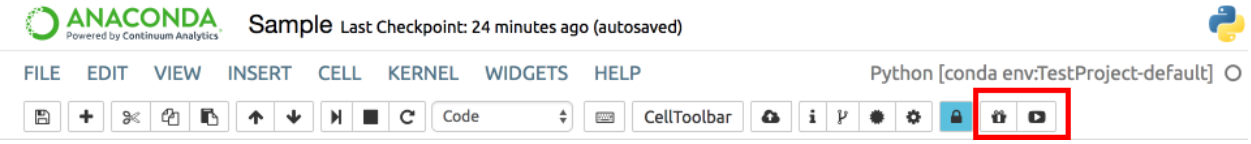
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



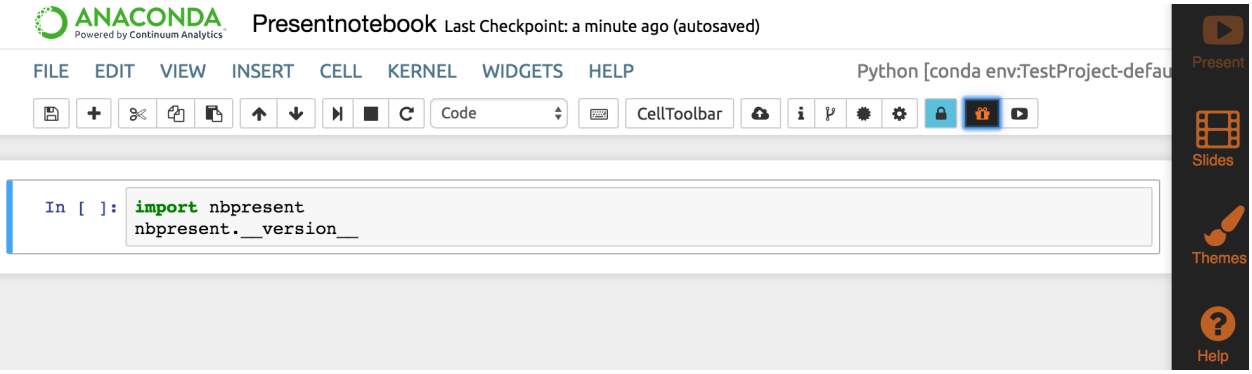
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

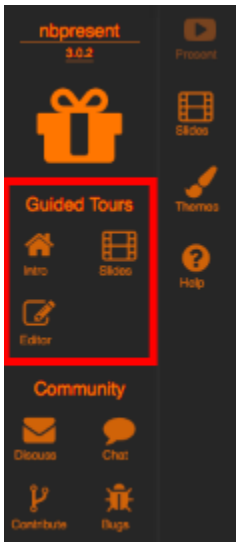


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

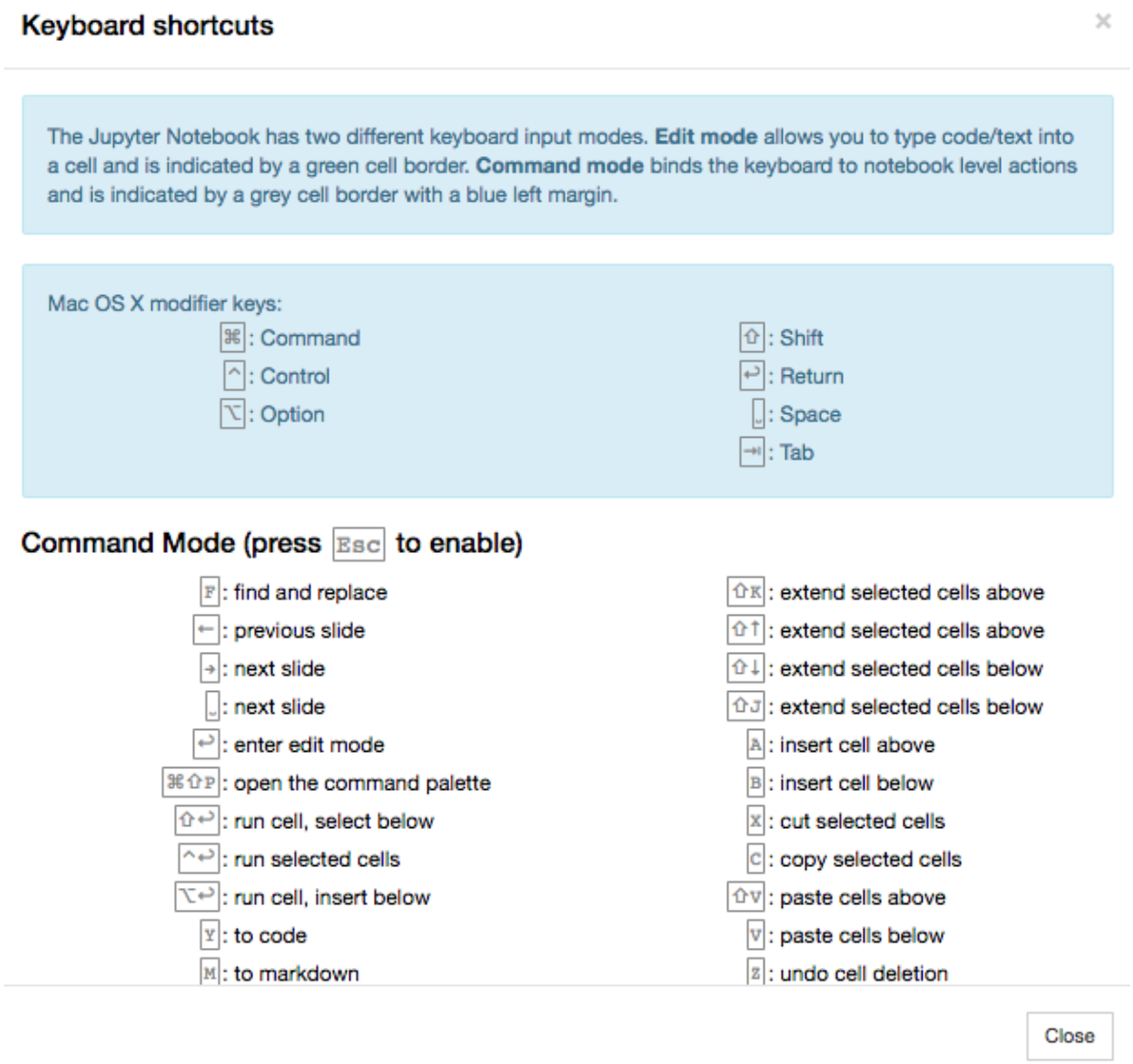
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

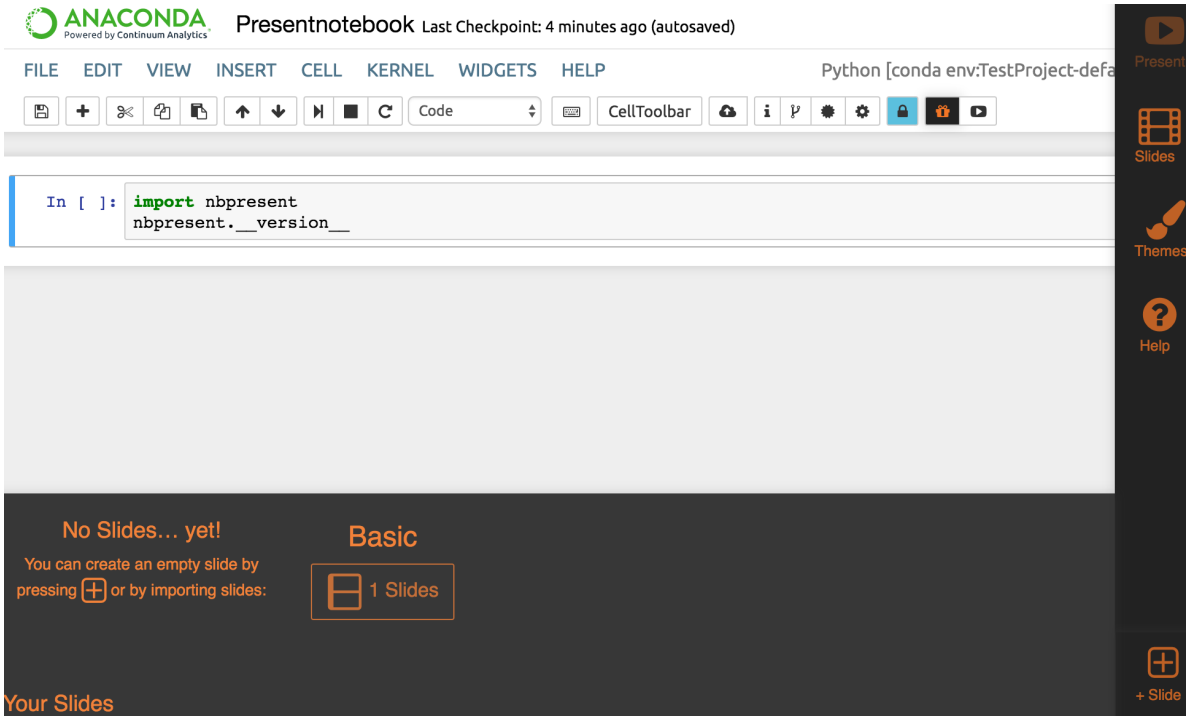
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

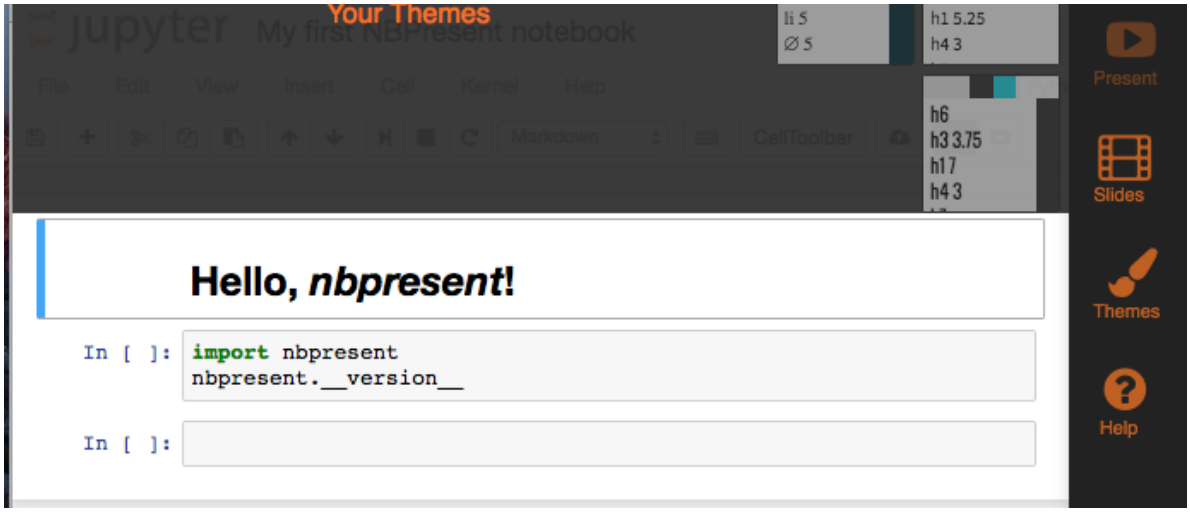
- App Bar—When Authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops Authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any Authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start Presenting, where you can use most Notebook functions with the Theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



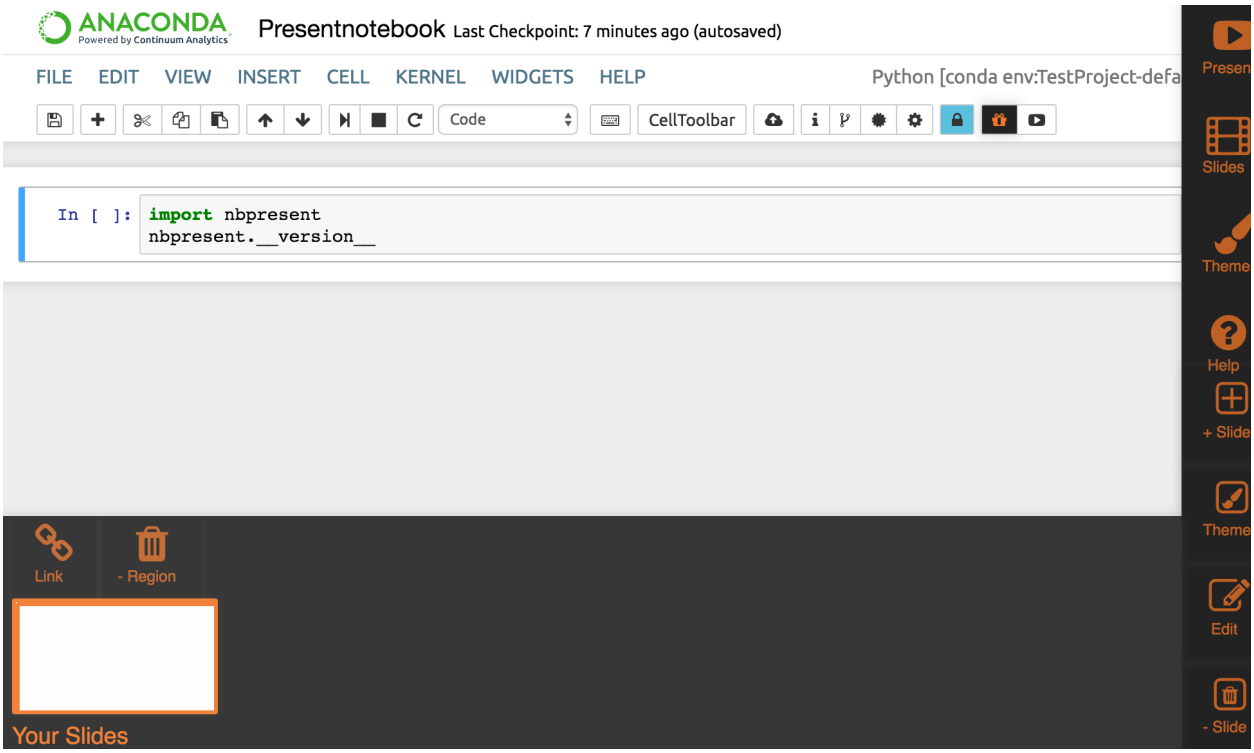
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook .ipynb file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate Help at any time to try other tours, connect with the Present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    * Cell Part: Source (blue)–Source, such as code and Markdown text.
    * Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    * Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    * Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a region and a cell part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

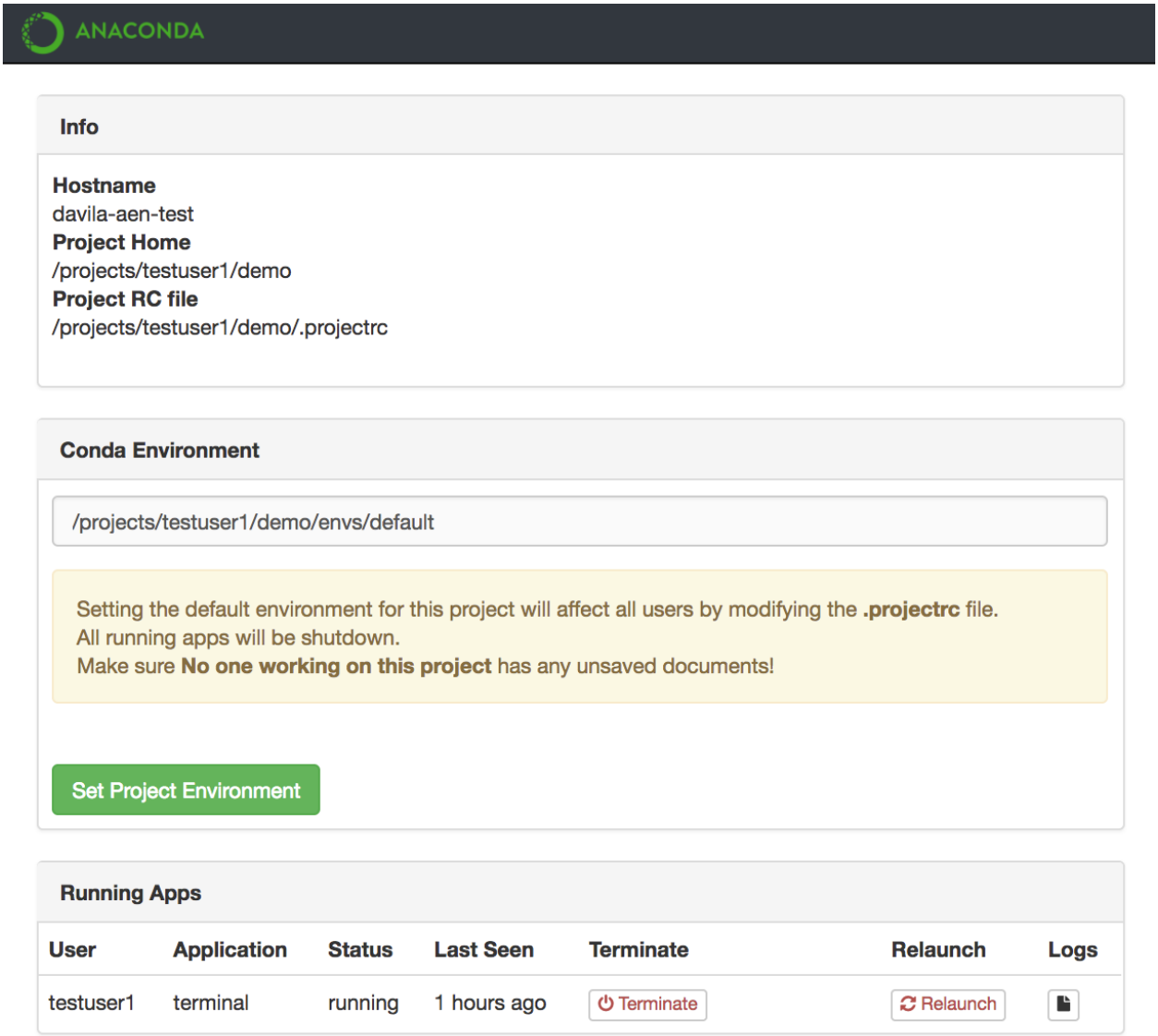
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

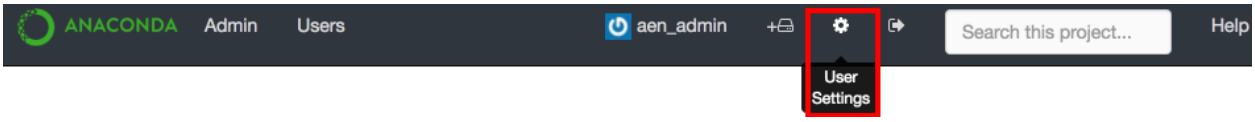
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

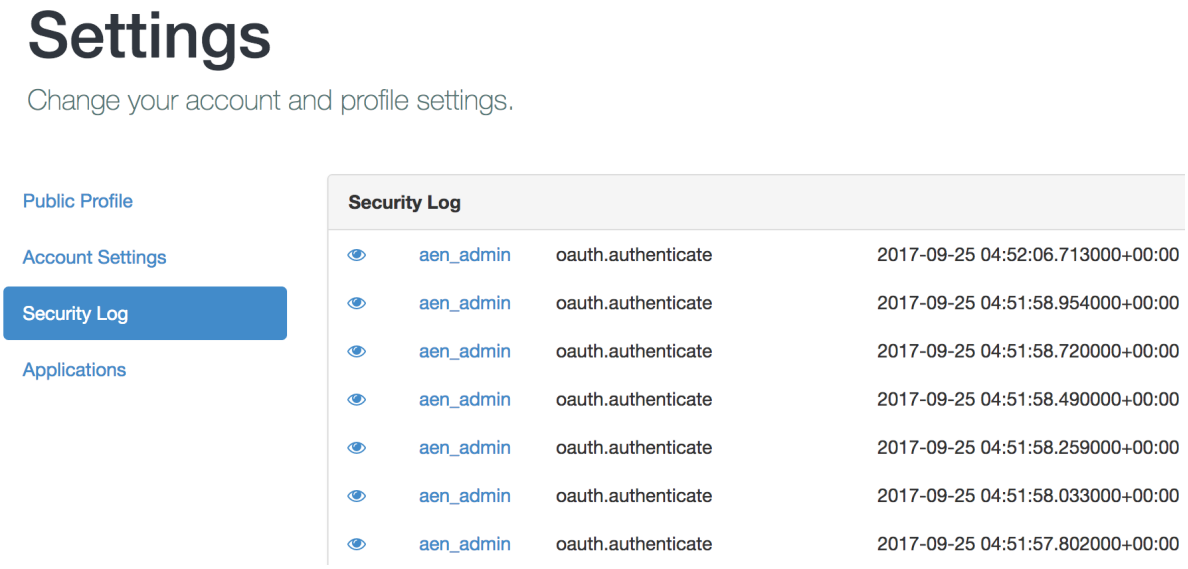
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

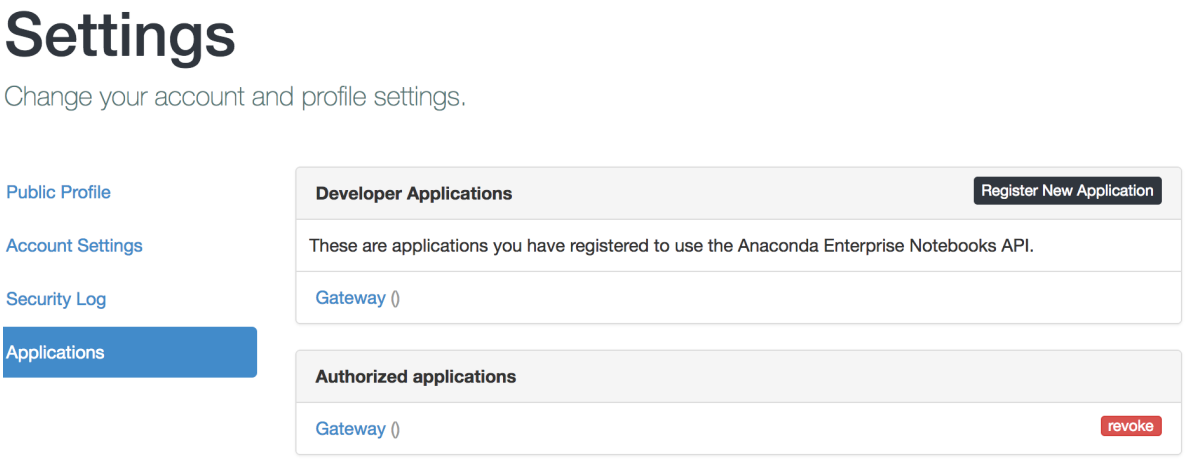


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

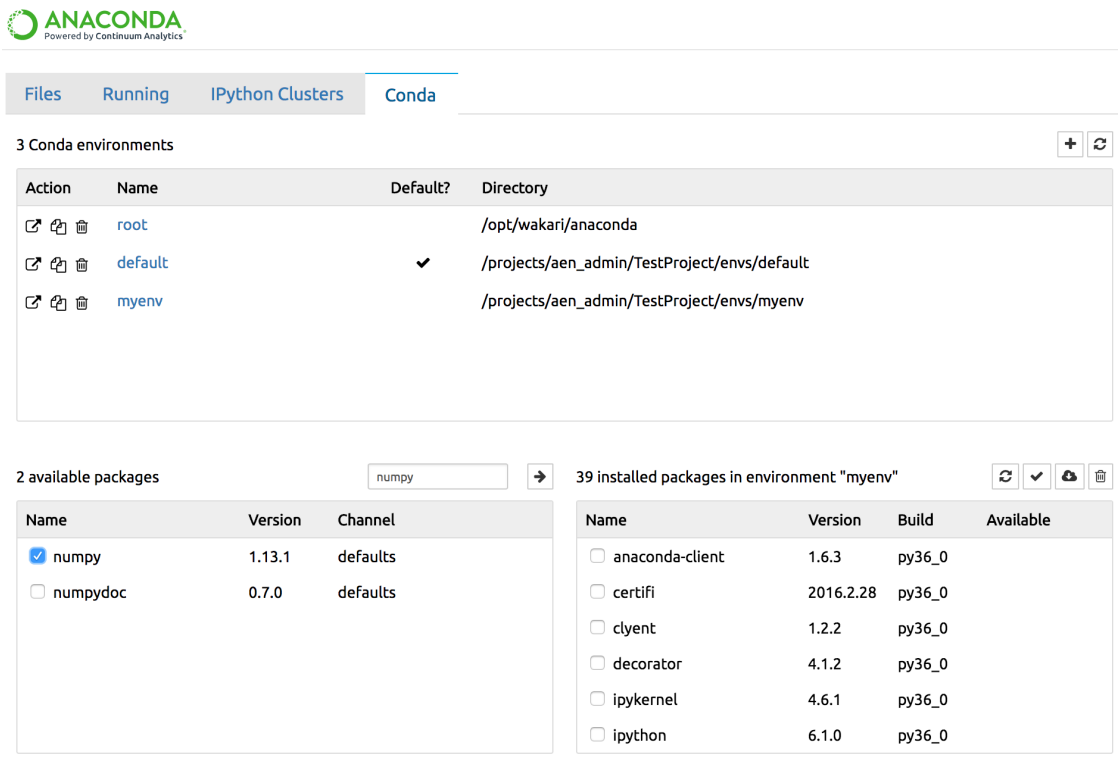
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

   ```
   conda create -n WeatherModel numpy
   ```

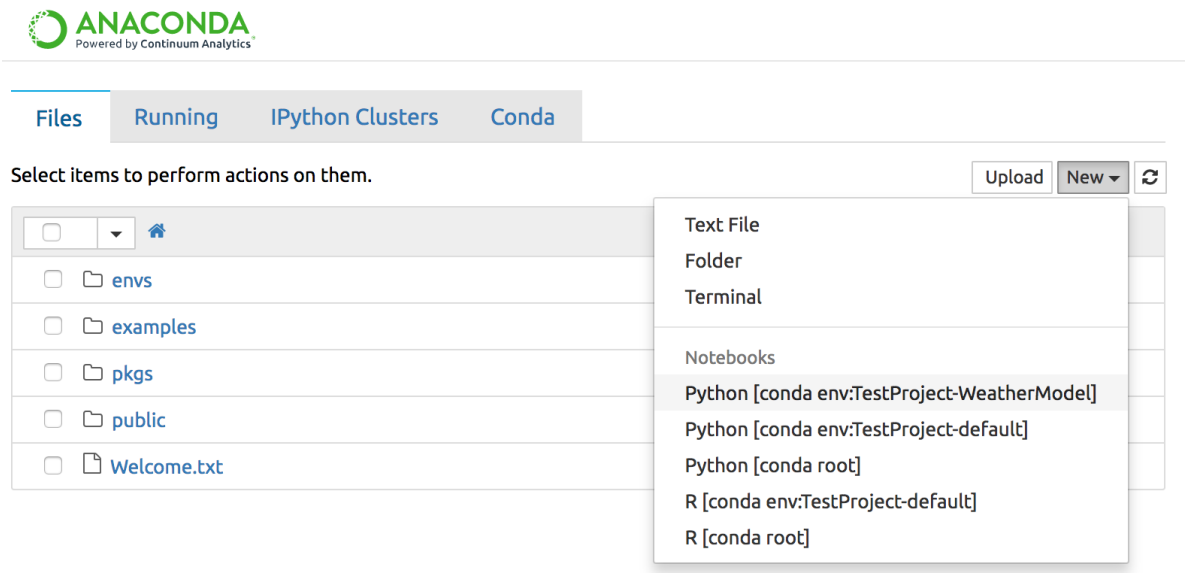
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select Python [conda env:test1-my_env].

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

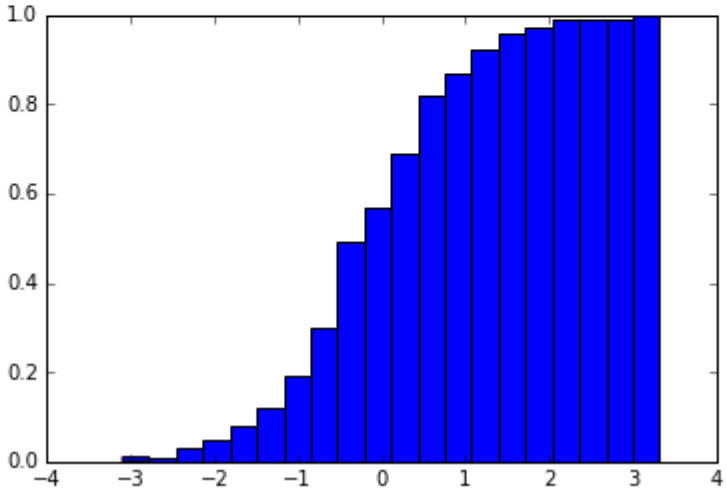
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

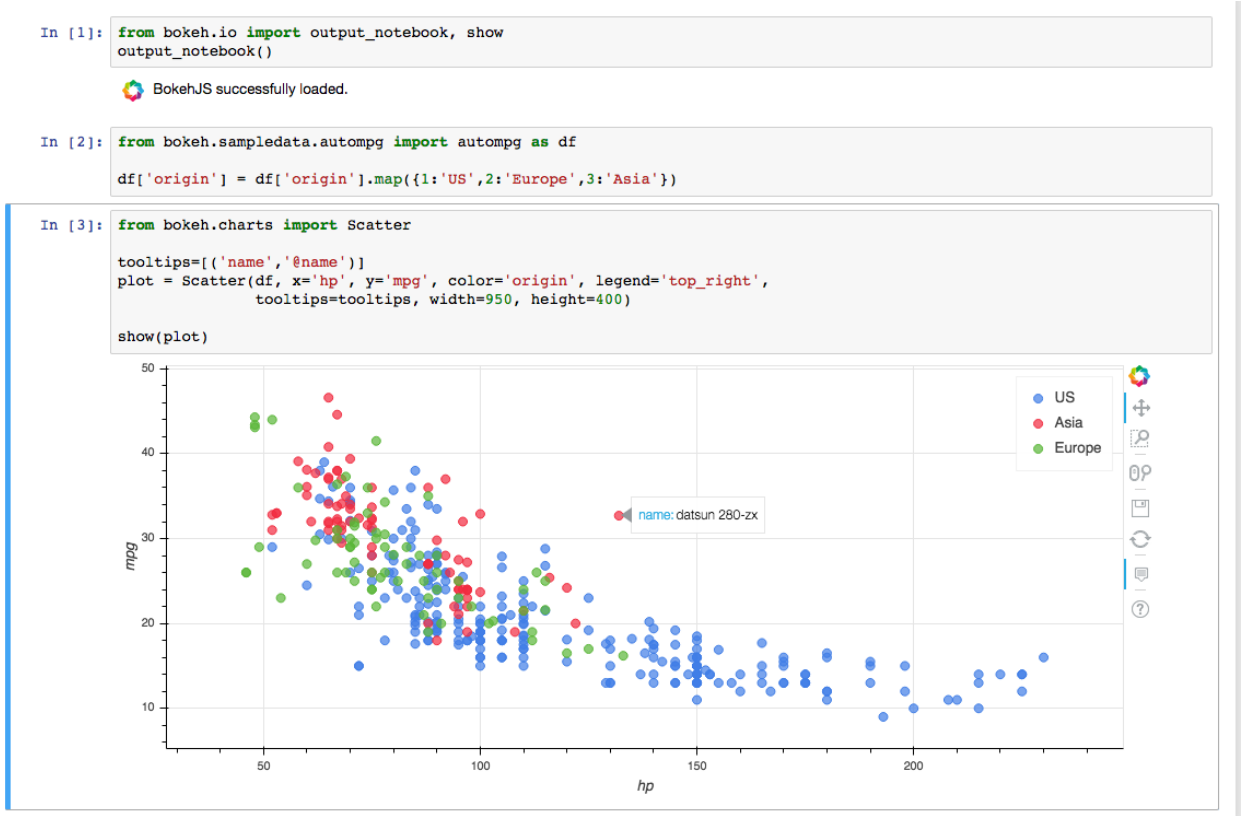
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

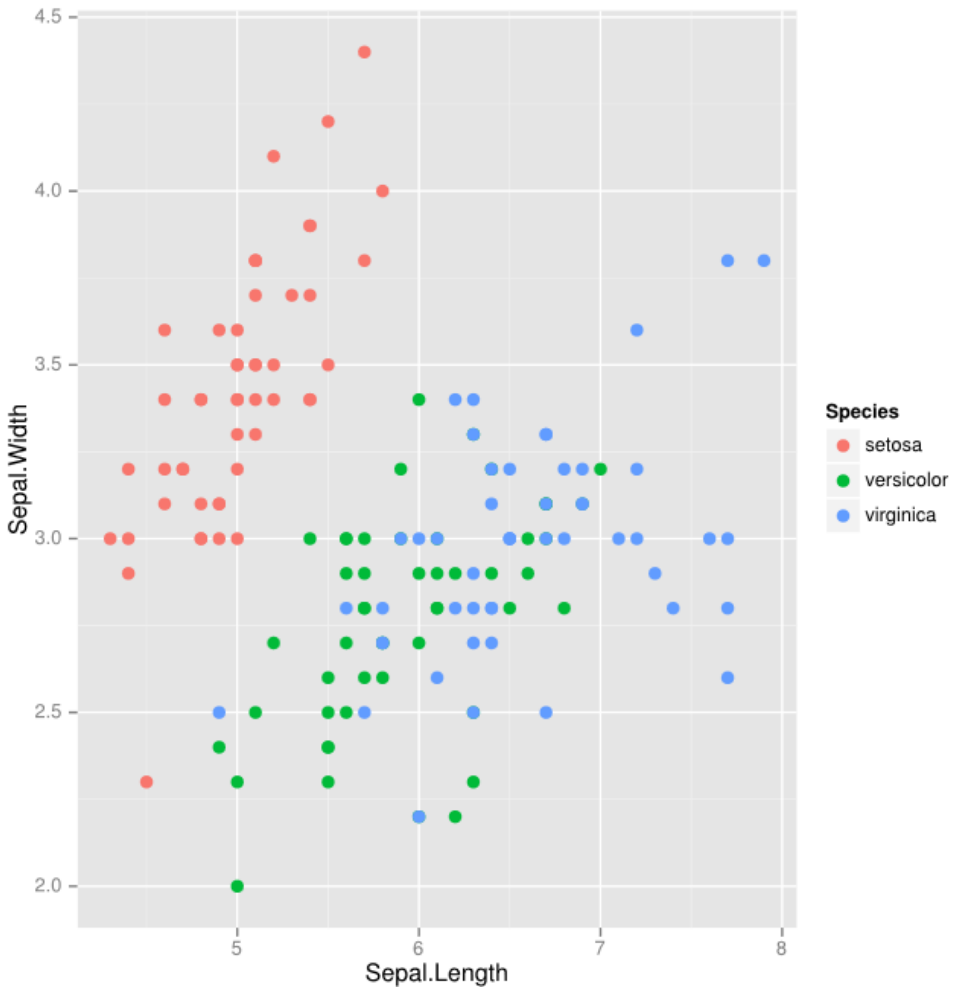
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the $PATH environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

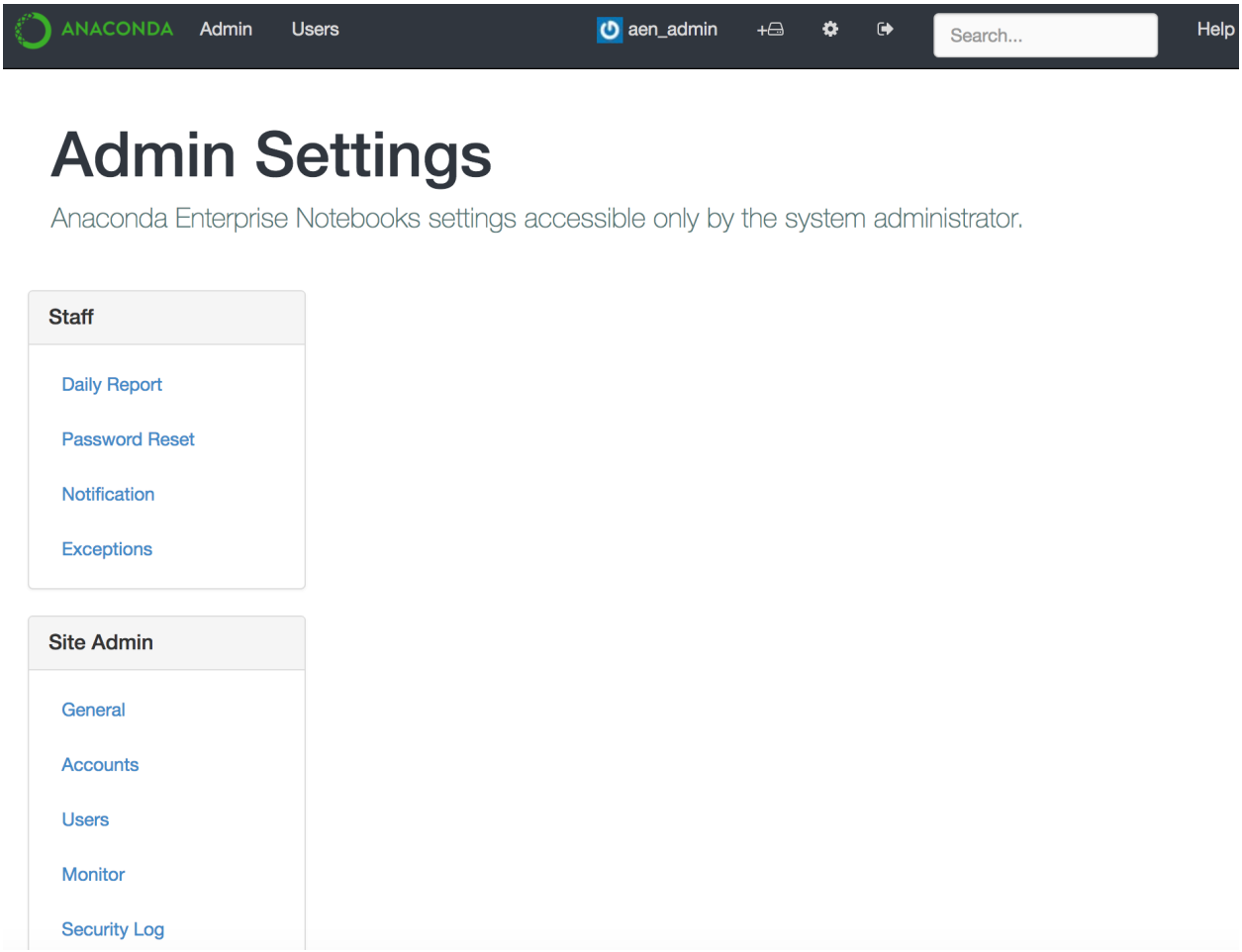
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



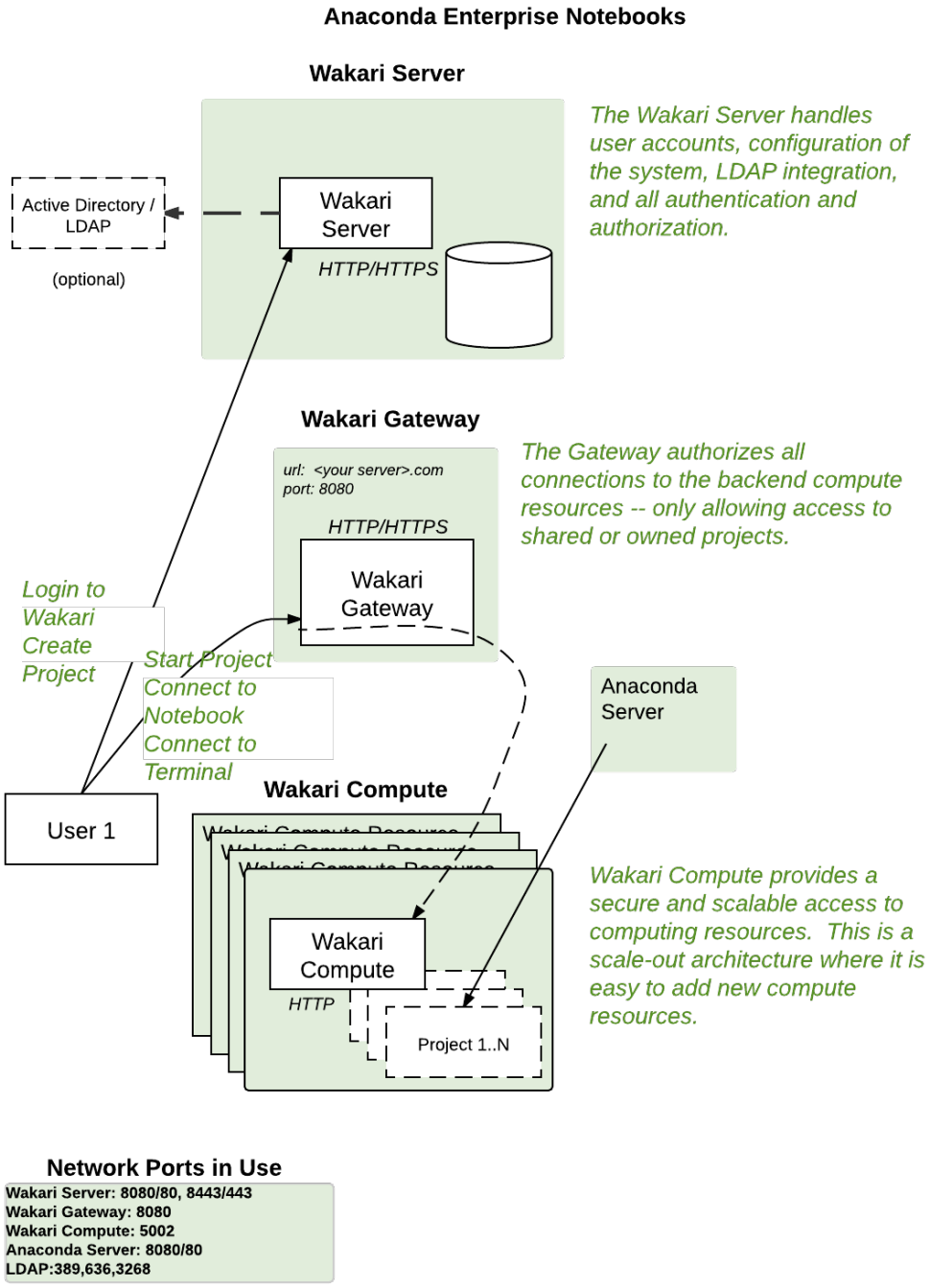
All of the other navigation bar items are the same as for a user account.

Concepts

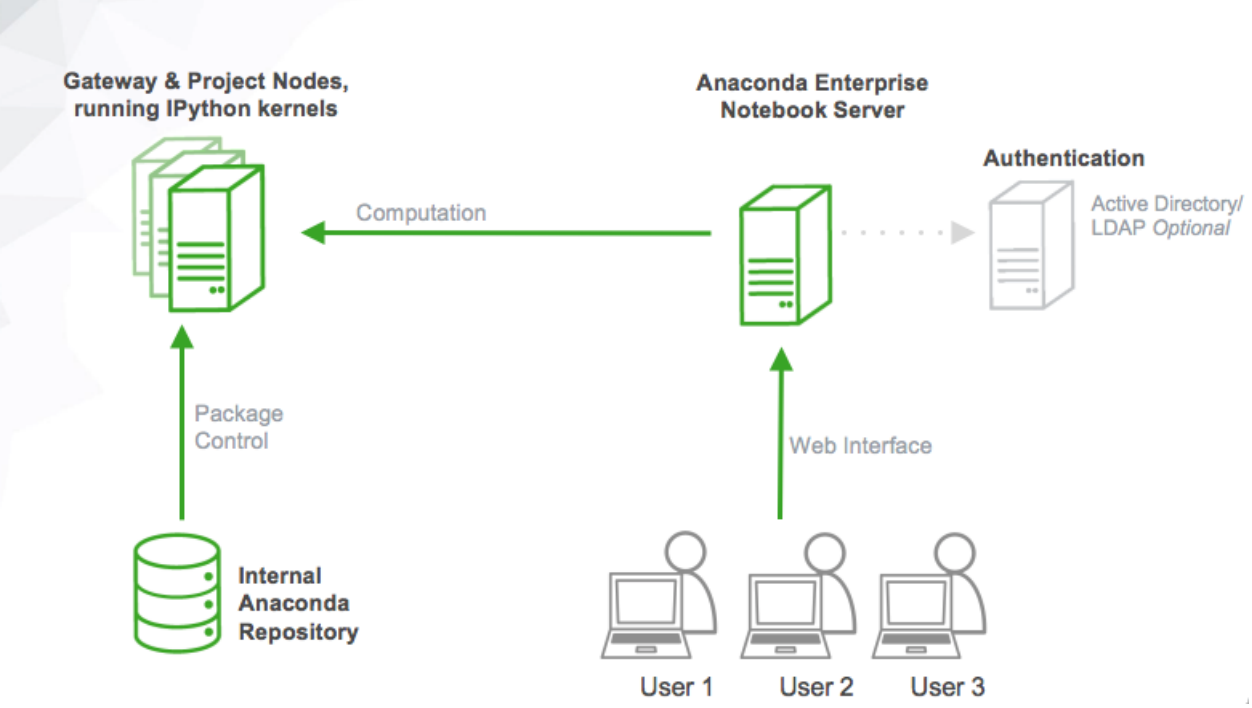
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Organizationally, each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for its internal data persistency. It is typically run on the same host as the server but can also be *installed* on a separate host.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web-process which runs on a high numbered port that only listens on localhost. NGINX is also responsible for static content.

Server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is: `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

Wk-compute loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually wakari or aen_admin.

The Supervisor daemon process is called "supervisord". It runs in the background and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name "default" into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

You can use a new conda environment to test a new version of a package before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, wakari or aen_admin.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Equal to or higher than version 2.6.8 and lower than version 3.0.
  - NGINX—Equal to or higher than version 1.6.2.
  - Elasticsearch—Equal to or higher than version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.3.1-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.3.1-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.3.1-Linux-x86_64.sh
```

NOTE: The current $RPM_CDN server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use *curl* or *wget* to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as `<AEN_SERVER_IP>` or `<AEN_SERVER_FQDN>`, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the AEN_SUDO_CMD environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an AEN_SUDO_CMD entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the *bzip2* package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.6.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.10.2-1.el7.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.3.1-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

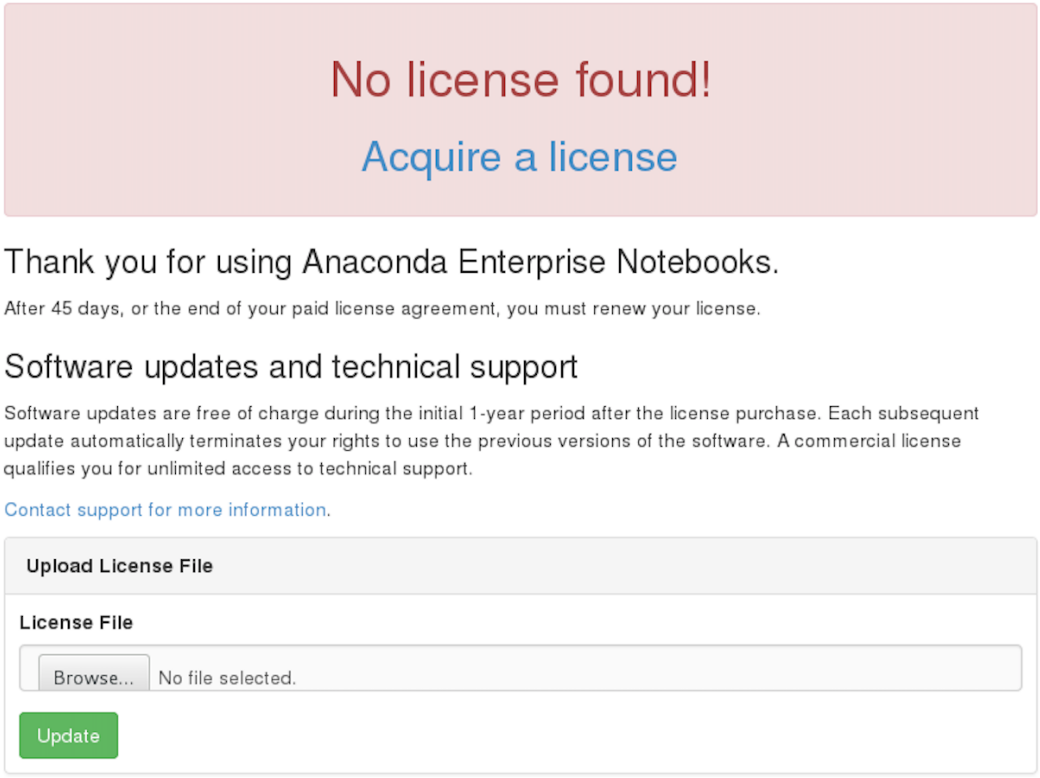
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

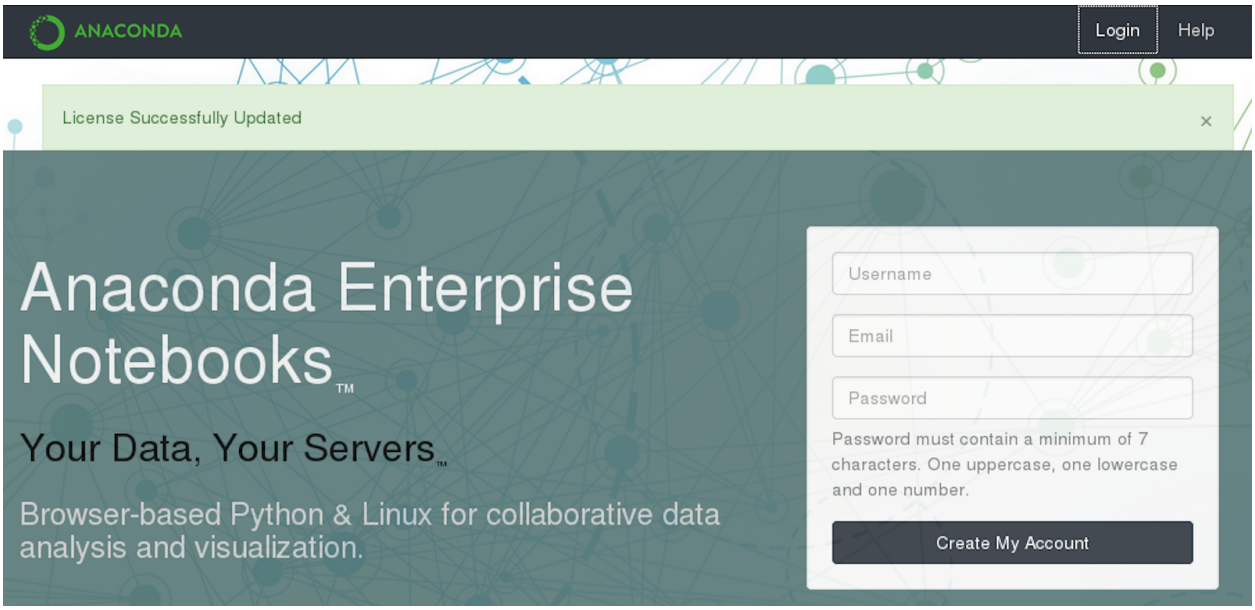
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.1-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

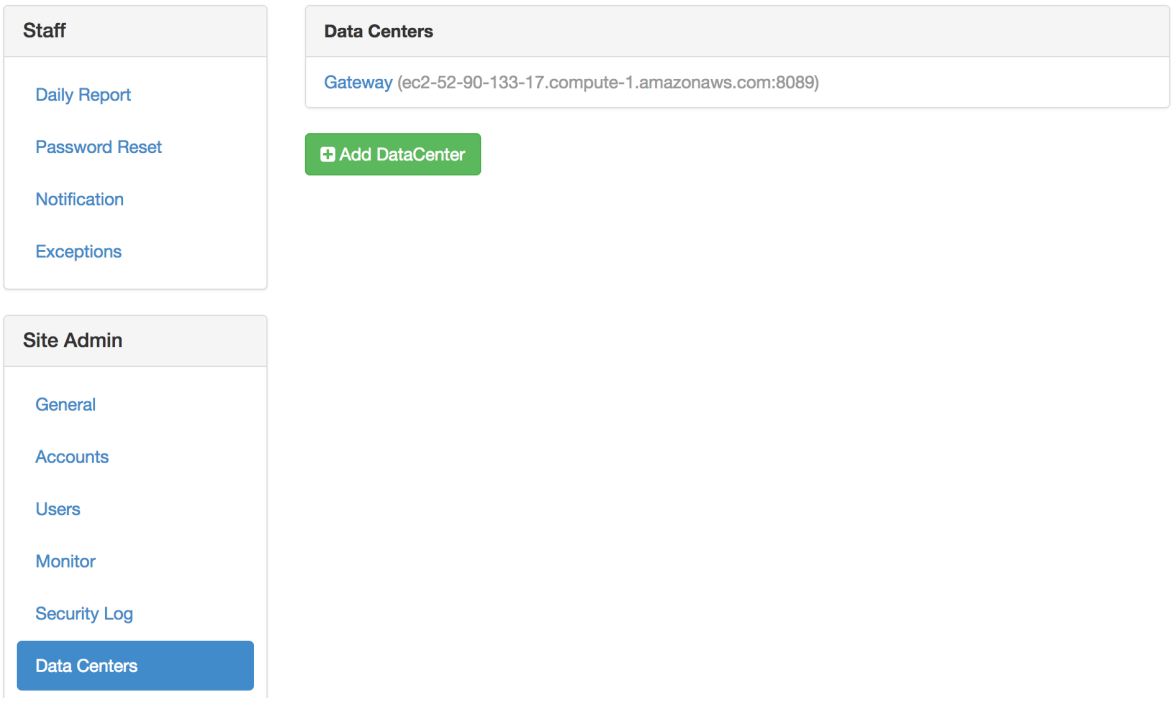
Starting the gateway

Run:

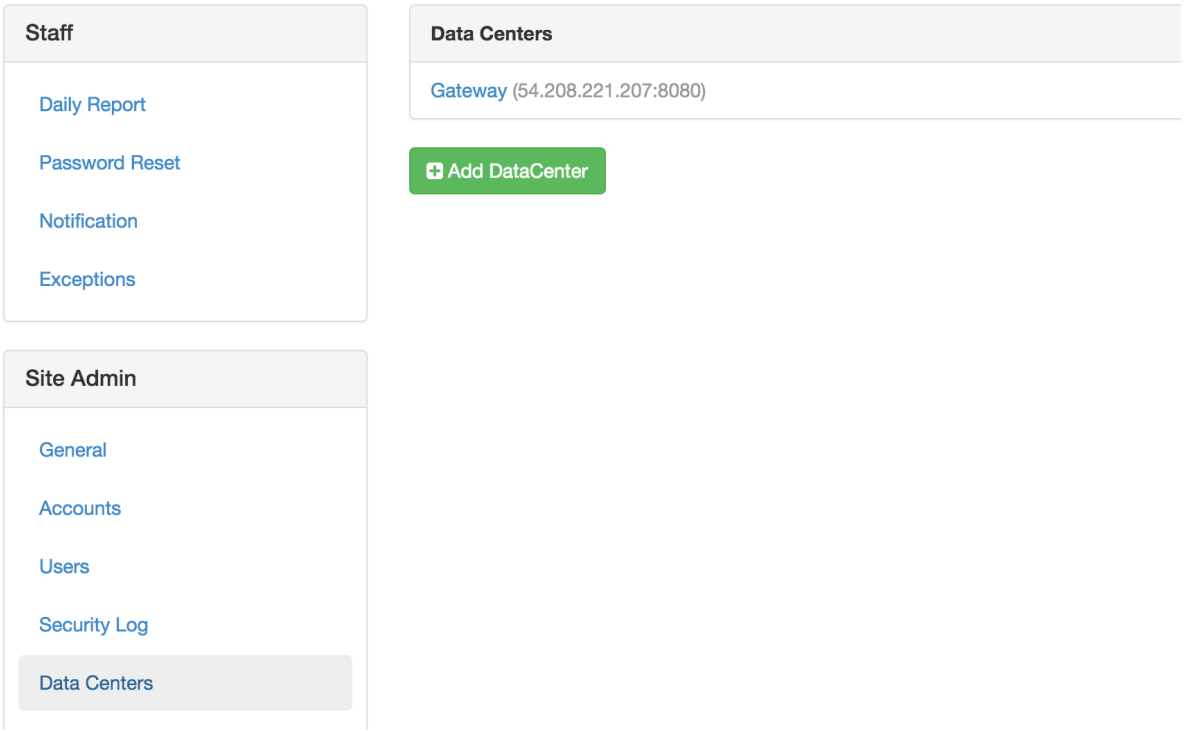
```
sudo service wakari-gateway start
```

Verifying your gateway registration

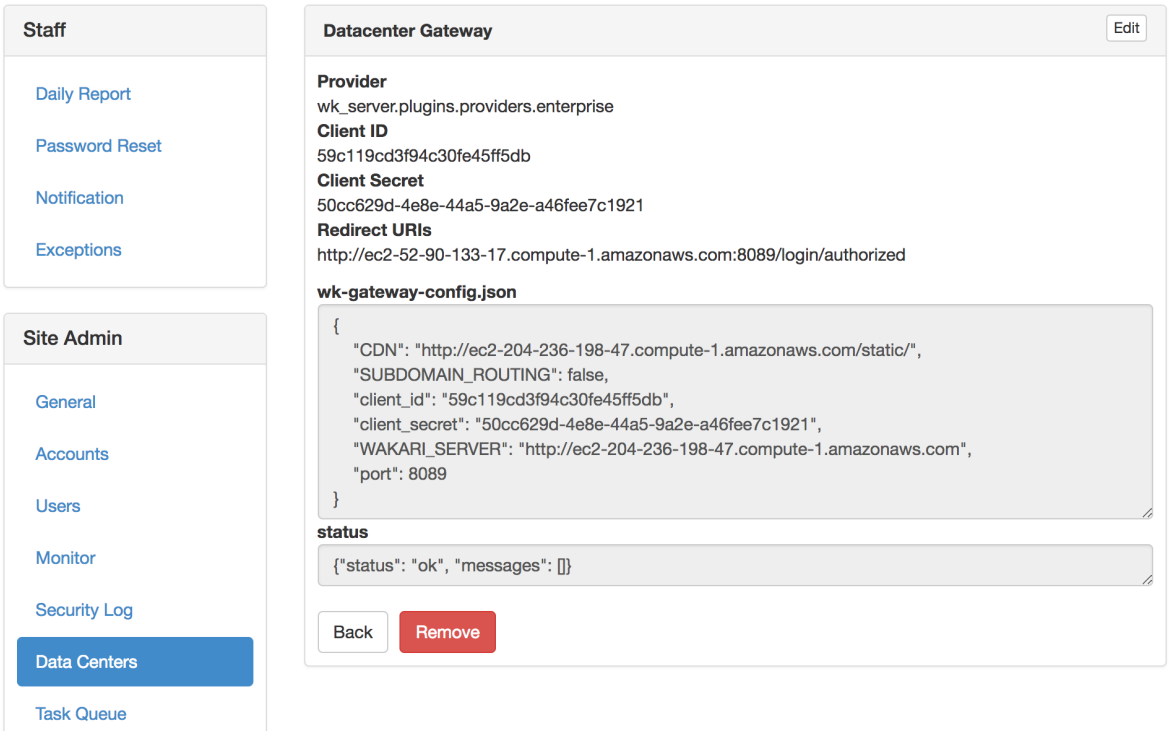
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.1-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

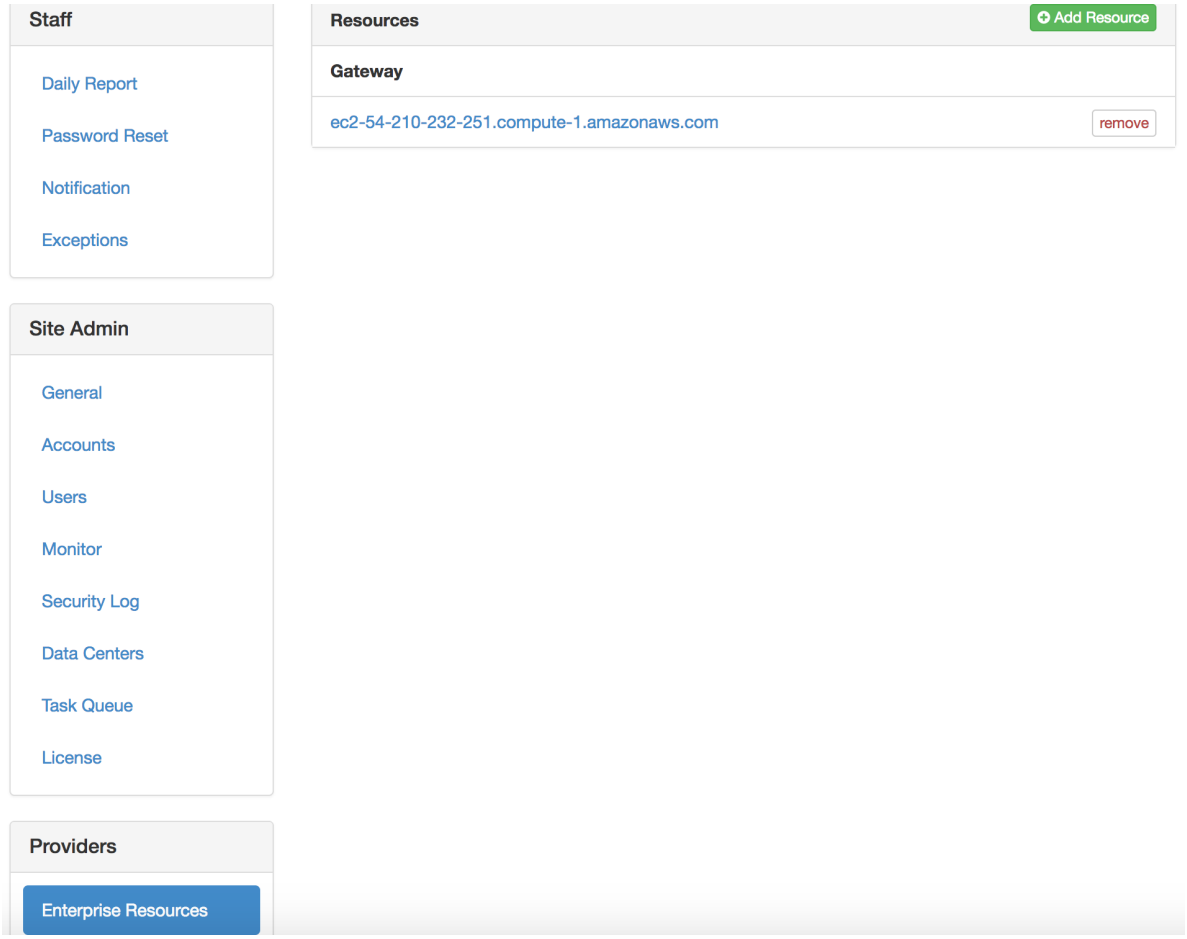
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

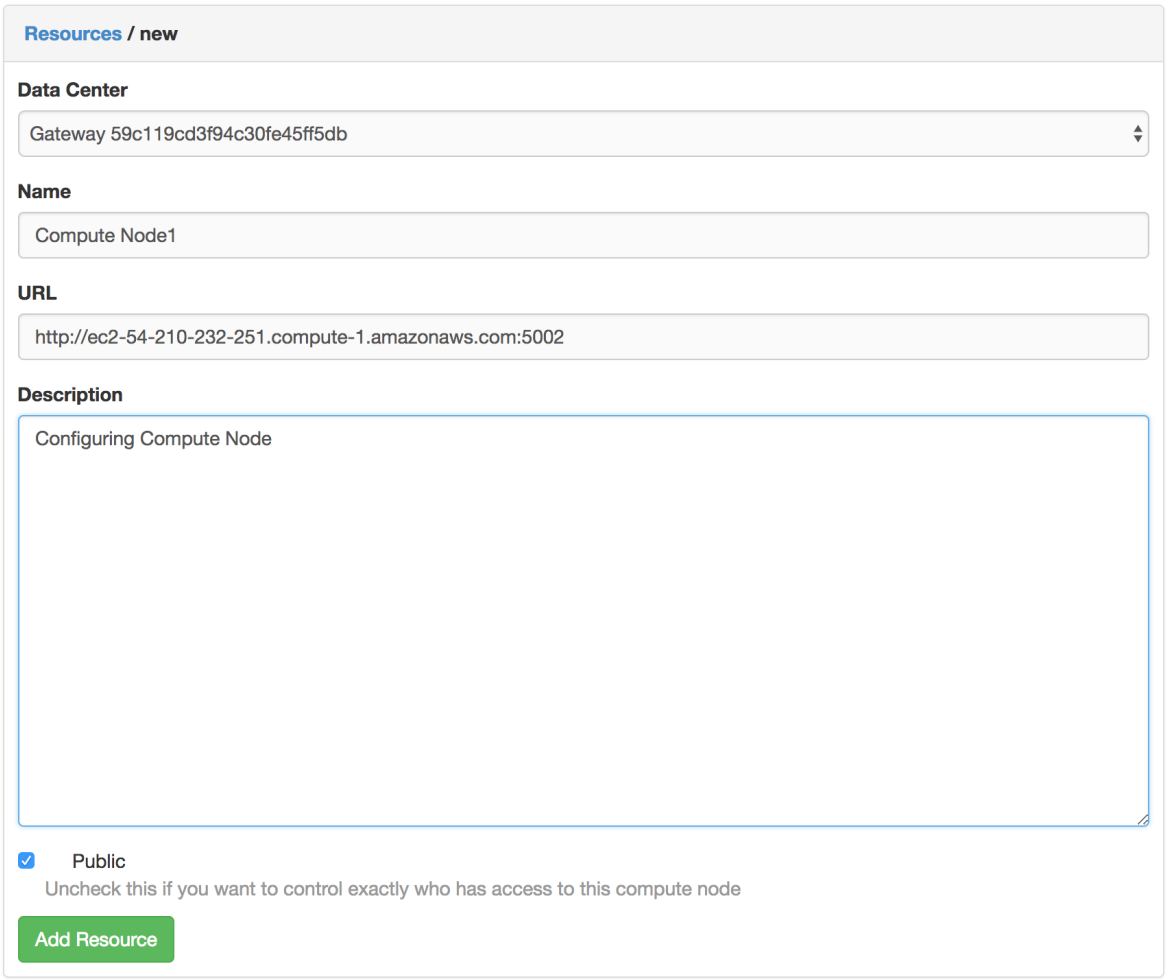
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the AEN_SRVC_ACCT user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda Repository server instead of Anaconda.org.

To configure AEN to use a local on-site Repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.anaconda.com
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with Repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

NOTE: Replace <`your Anaconda Repository`> with the actual name or IP address of your local Anaconda Repository installation.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 306: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The Cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some Enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set `uniqueEmail` to `false`, you must drop the existing index in the database. EXAMPLE: If the index name is `email_1`, run `db.users.dropIndex("email_1")`.

Table 307: Gateway Configuration Keys

Key	Default	Description
`WAKARI_SERVER`		The URL of the AEN `WAKARI_SERVER`.
`port`	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
`client_id`		The client ID assigned to this gateway by the server during `wk-gateway-configure`.
`client_secret`		The Client secret assigned to this gateway by the server during `wk-gateway-configure`.
`httpTimeout`	600	Timeout in seconds. The default is 10 minutes to allow project creation.
`logLevel`	`info`	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
`https`		Enable SSL encryption. For more information, see *Configuring SSL*.
`- key`		A https subkey–Path to gateway key.
`- cert`		A https subkey–Path to gateway cert.
`- ca`		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
`- passhphrase`		A https subkey–Passphrase required to decrypt SSL certs.

Table 308: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.

Table 309: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server.plugins.providers.enterprise"]	A list of compute provider classes.
MONGO_ACTION_LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM _EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 310: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 311: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari- compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

   ```
   "httpTimeout": 600
   ```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda environment directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

   ```
   "projectRoot" : "/nfs/storage/services/wakari/projects",
   ```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the identicalGID key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: ALL
```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

```
"MANAGE_ACCOUNTS": false,
```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

   ```
   "AEN_SUDO_CMD": "/path/to/alternative/sudo",
   ```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
   ```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

   ```
   "AEN_SUDO_SH": "/path/to/gatekeeper"
   ```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.

3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.

4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.

5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.

8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

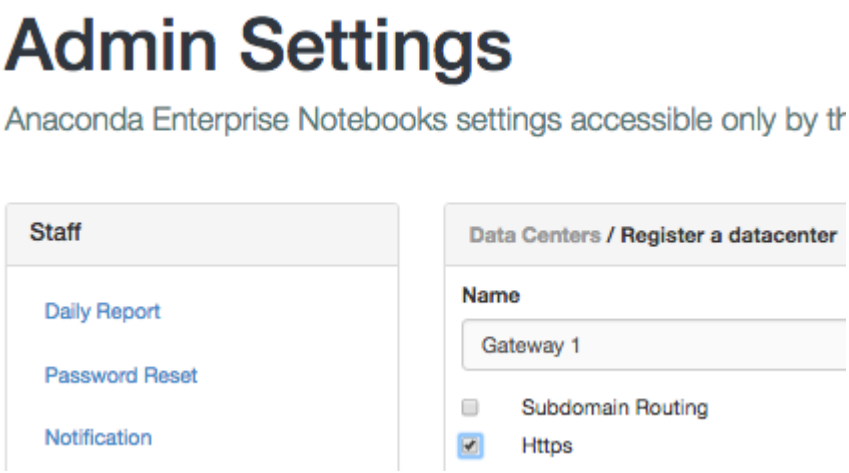
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

   NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt"
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

   NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

   EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

```
{
EXISTING_CONFIGURATION,
"SECRET_KEY": "<repo signing secret>",
"REPO_LOGIN_URL":
   "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
}
```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

```
{
EXISTING_CONFIGURATION,
"accounts": "wk_server.plugins.accounts.repo",
}
```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The jupyter-contrib-nbextensions extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in */opt/wakari/wakari-compute/share/jupyter/kernels/*.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel without the user .ipython space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The pyspark.sh script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: *.local/share/jupyter/kernels/pyspark/*. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following kernel.json file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace "<username>" with the correct user name and "<project_name>" with the correct project name.

You may choose any name for the 'display_name'.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"
```

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```
# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Enabling server-side session management

By default, AEN uses client-side session management which is vulnerable to session replay attacks if an attacker manages to steal a valid session ID of a user.

To enable server-side session management:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "USE_SERVER_BASED_SESSIONS": true,
   ```

2. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

Terminate terminal sessions on logout

By default, when a user logs out, their open terminal sessions will remain active.

To disable this behavior:

1. Modify the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

2. Modify the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file:

   ```
   "TERMINATE_TERMINALS_ON_LOGOUT": true,
   ```

3. Restart the AEN server service:

   ```
   sudo service wakari-server restart
   ```

4. Restart the AEN gateway service:

   ```
   sudo service wakari-gateway restart
   ```

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.3.1 from 4.3.0 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.3.0 upgrade instructions*
- *AEN 4.2.2 upgrade instructions*
- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                             \
                 wakari-enterprise-server-conf-update=2.0.11
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

   AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

   Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.

9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.11
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

   ```
   ps aux | grep wakari-indexer
   ```

   NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

   Terminate any remaining `wakari-indexer` processes:

   ```
   sudo killall wakari-indexer
   ```

   NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

   ```
   ps aux | grep wk-app-gateone
   ps aux | grep wk-app-workbench
   ps aux | grep wk-app-viewer
   ps aux | grep wk-app-terminal
   ps aux | grep jupyter-notebook
   ```

   NOTE: If you stopped all the projects, you will not see any AEN app processes running.

   Terminate any remaining AEN application processes by running one or more of the following:

   ```
   sudo killall wk-app-gateone
   sudo killall wk-app-workbench
   sudo killall wk-app-viewer
   sudo killall wk-app-terminal
   sudo killall jupyter-notebook
   ```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

   ```
   channels:
     - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
     - r
     - https://conda.anaconda.org/wakari
     - defaults

   create_default_packages:
     - anaconda-client
     - ipykernel
   ```

NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                -p /opt/wakari/wakari-compute        \
                --file aen-compute-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
                --no-deps                            \
                -p /opt/wakari/wakari-compute        \
                wakari-enterprise-compute-conf-update=2.0.15
popd
```

NOTE: When upgrading the wakari-compute environment, you may see ImportError warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

5. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

6. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

7. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

8. Install necessary dependencies:

NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

9. Start the compute service:

```
sudo service wakari-compute start
```

10. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

11. Restart the AEN Server with:

```
sudo service wakari-server restart
```

12. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_1

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4_3_1
popd
```

   To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_1

sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4_3_1
popd
```

   NOTE: Replace `<USER>` with the user's name. Replace `<PROJECT>` with the project name.

   NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

   NOTE: These commands update packages listed in `aen-anaconda-update-4_3_1` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

   ```
   service wakari-server stop
   ```

2. Stop MongoDB:

   ```
   service mongod stop
   ```

3. Remove AEN server software, AEN database files and NGINX configuration:

   ```
   rm -Rf /opt/wakari/wakari-server
   rm -Rf /opt/wakari/miniconda
   rm -Rf /var/lib/mongo/wakari*
   rm -Rf /etc/nginx/conf.d/www.enterprise.conf
   ```

   NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

   ```
   service mongod restart
   service nginx restart
   ```

5. Check for any outstanding server processes and stop them:

   ```
   ps -ef | grep -e wakari-server -e wk-server
   ```

6. Remove the AEN Service Account:

   ```
   userdel $AEN_SRVC_ACCT
   ```

7. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

   ```
   grep -i aen ~/.condarc
   grep -i wakari ~/.condarc
   ```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

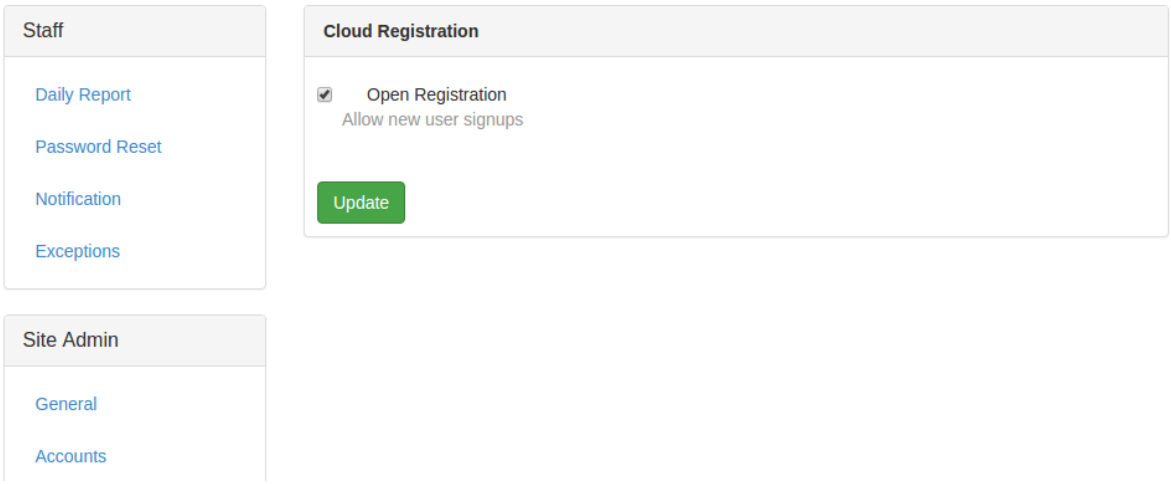
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

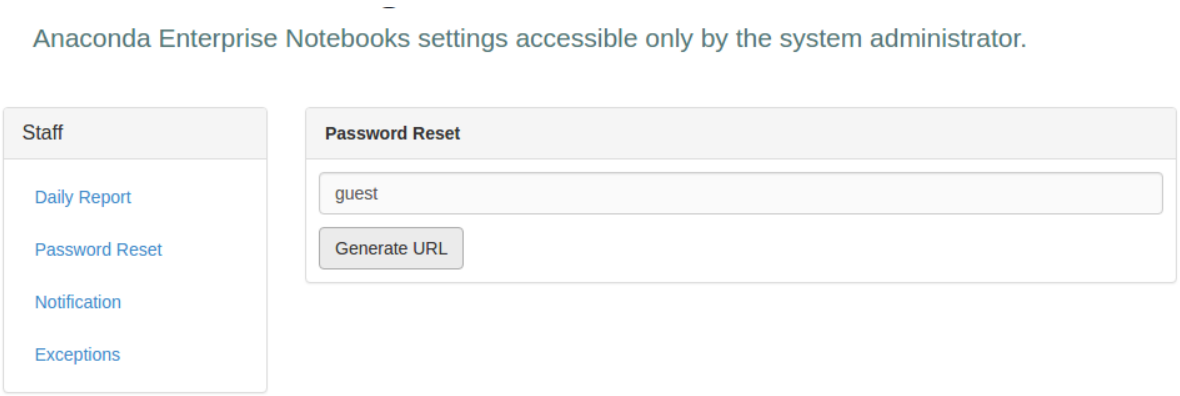
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.
2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

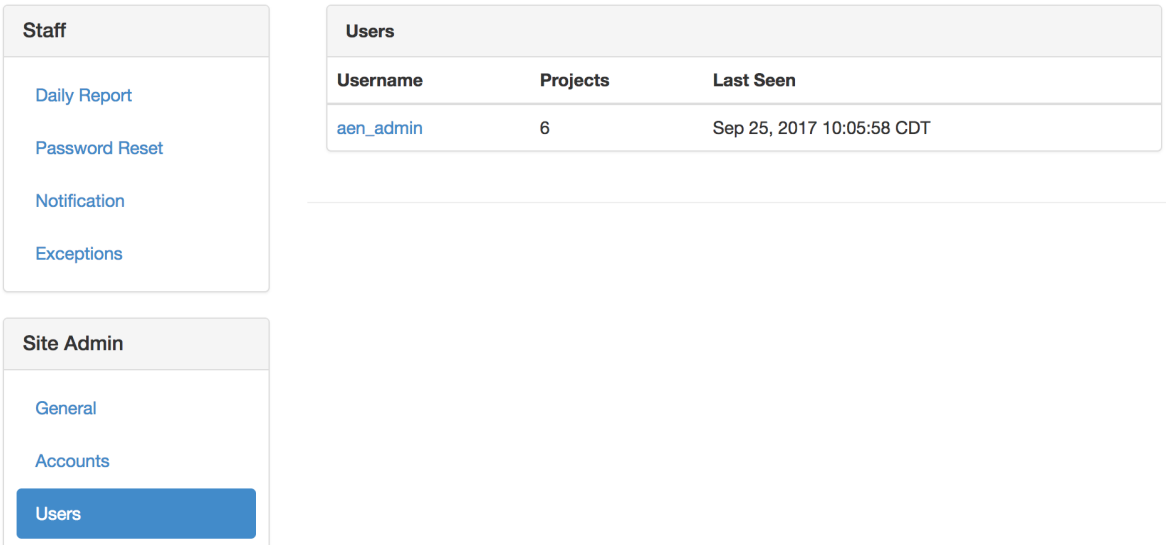
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

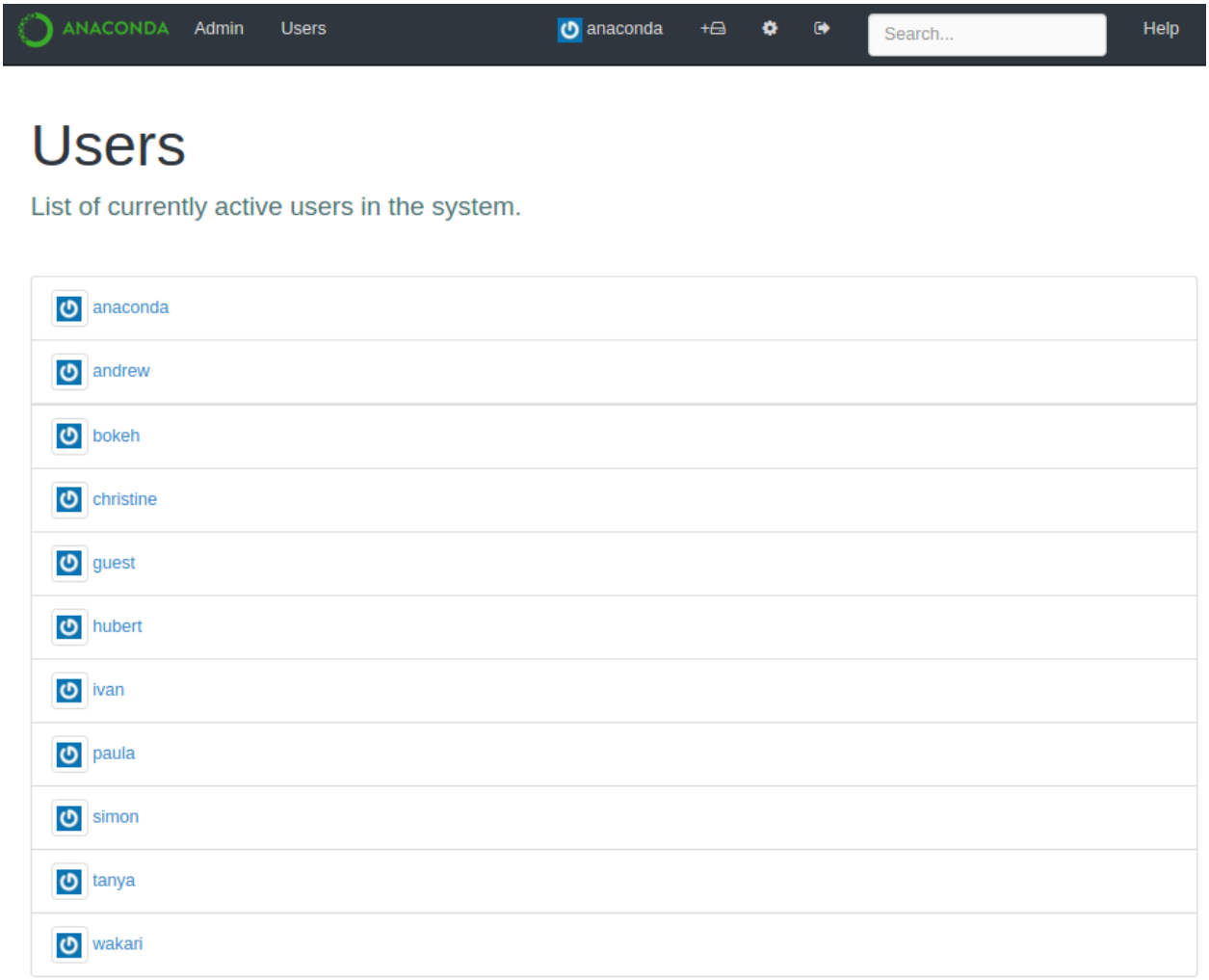
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

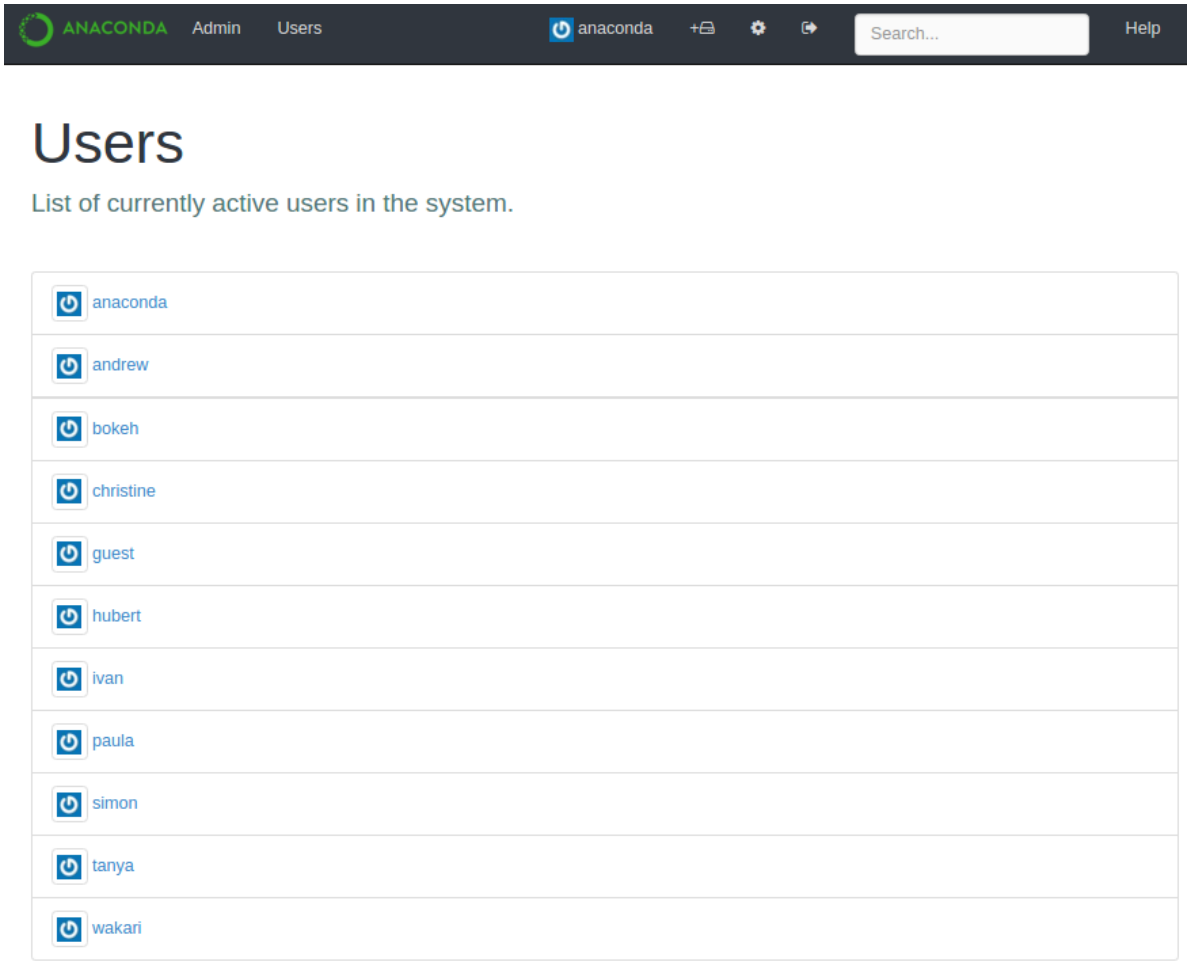


Click a username to open the user's profile page.

Viewing a user profile

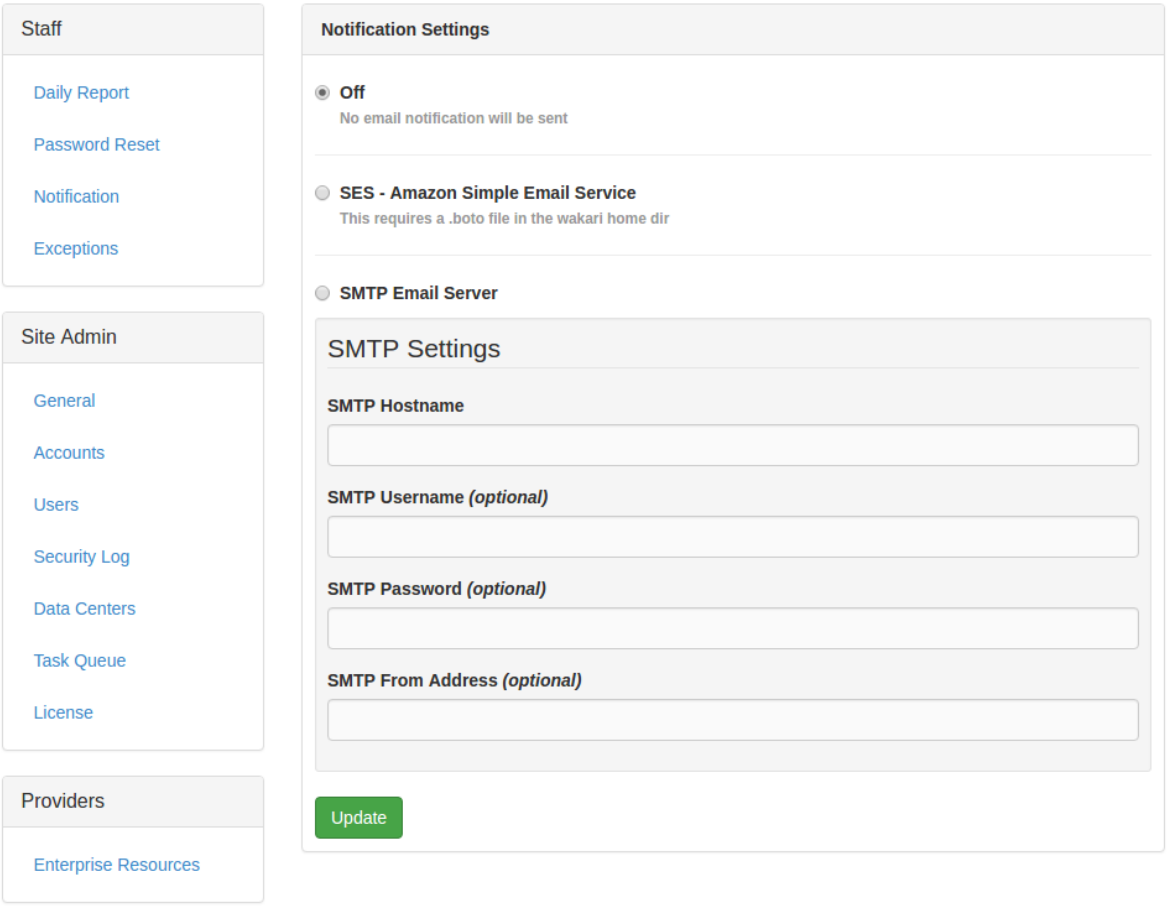
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

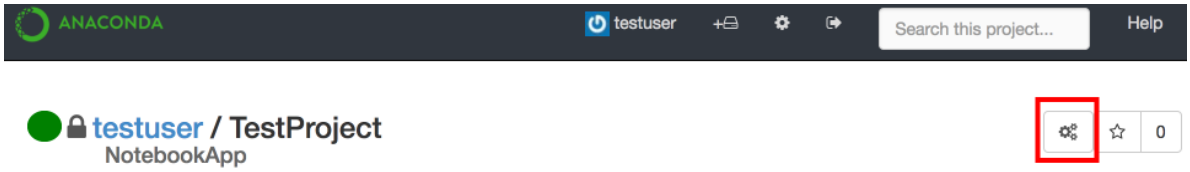
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

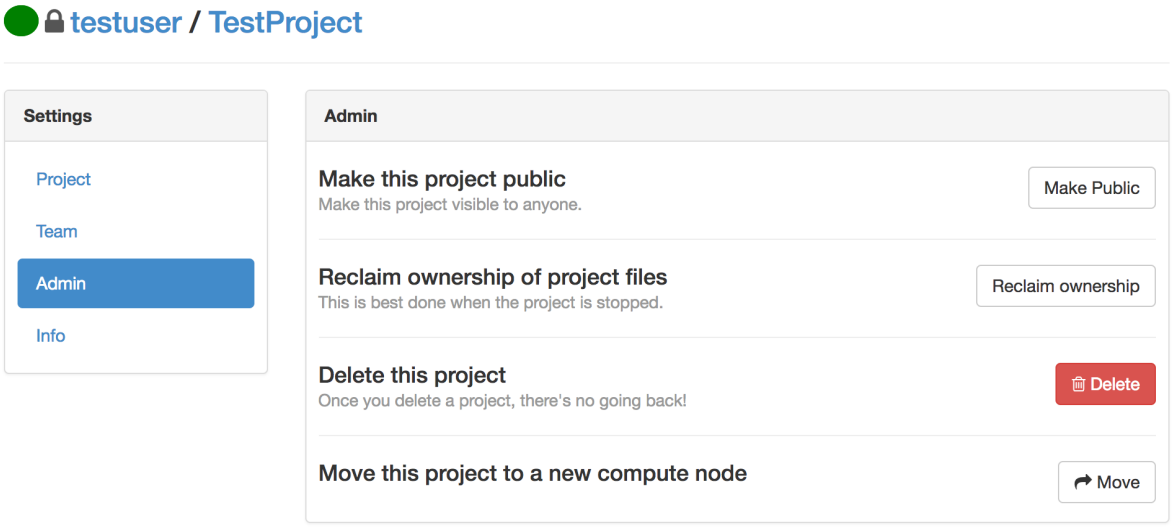
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

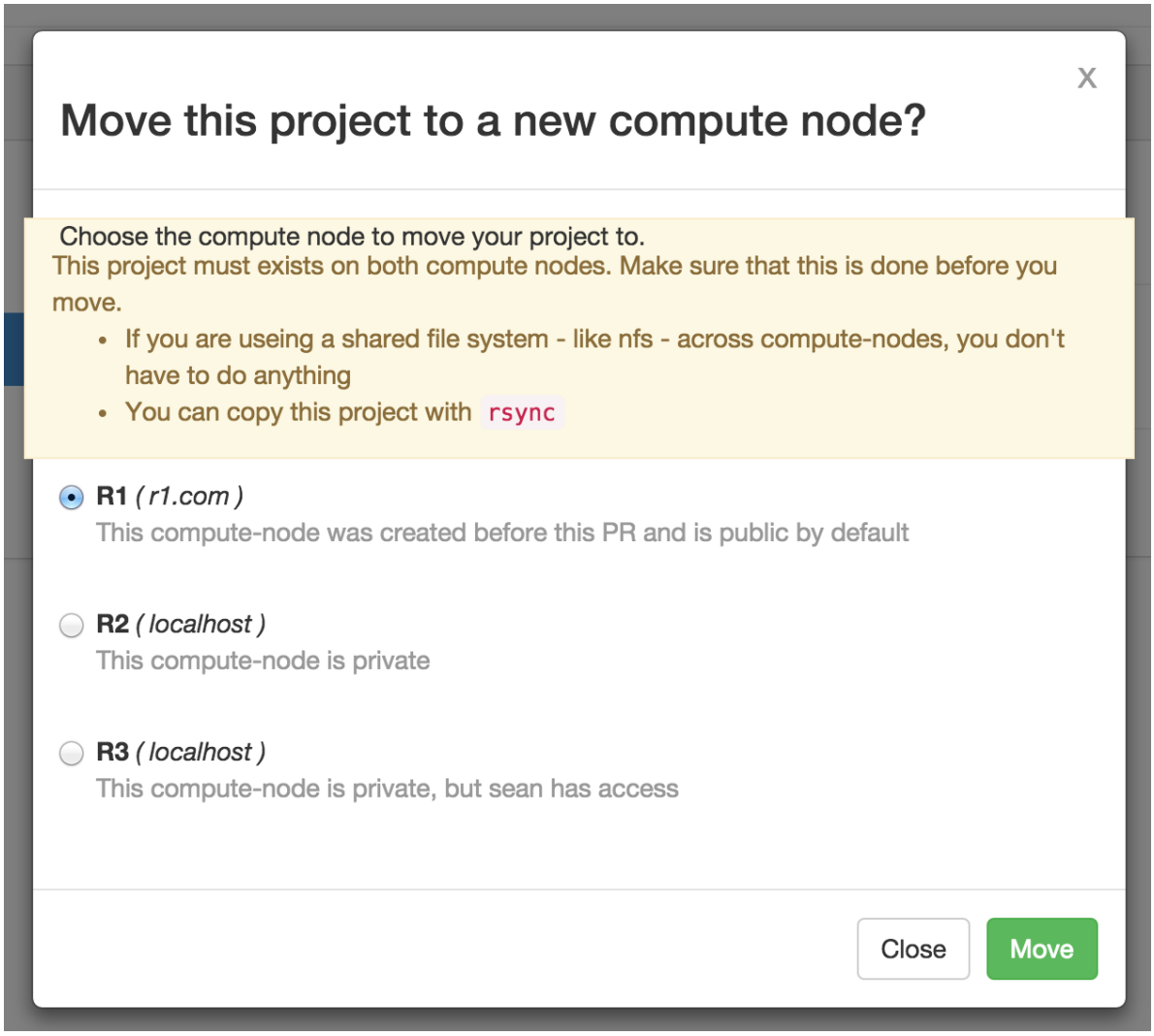
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

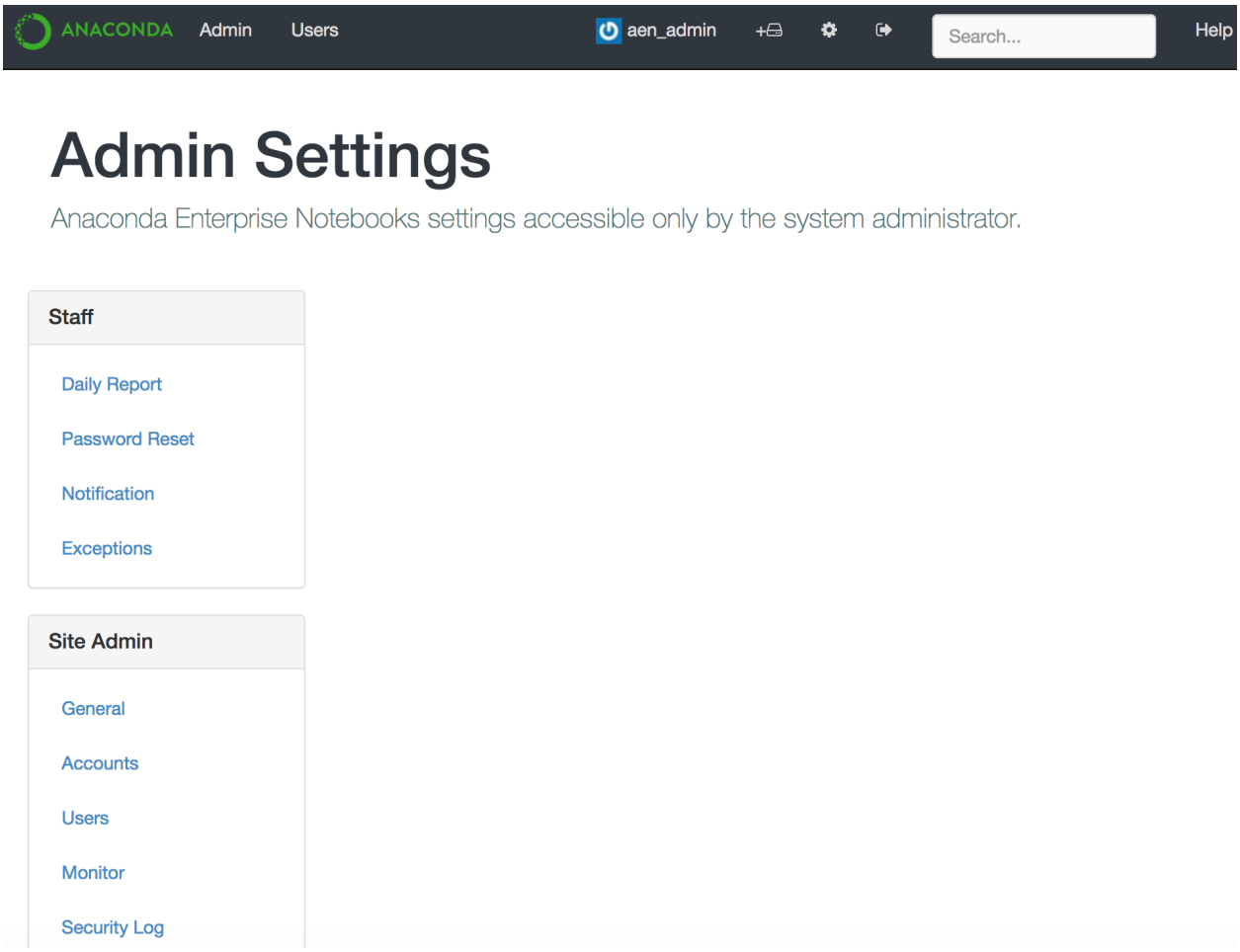
NOTE: Replace `<username>` with the actual username and `<projectname>` with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by $AEN_SRVC_ACCT.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.1-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by $AEN_SRVC_ACCT.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in /opt/wakari/wakari-gateway/etc/wakari/ and are owned by the $AEN_SRVC_ACCT.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.1-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

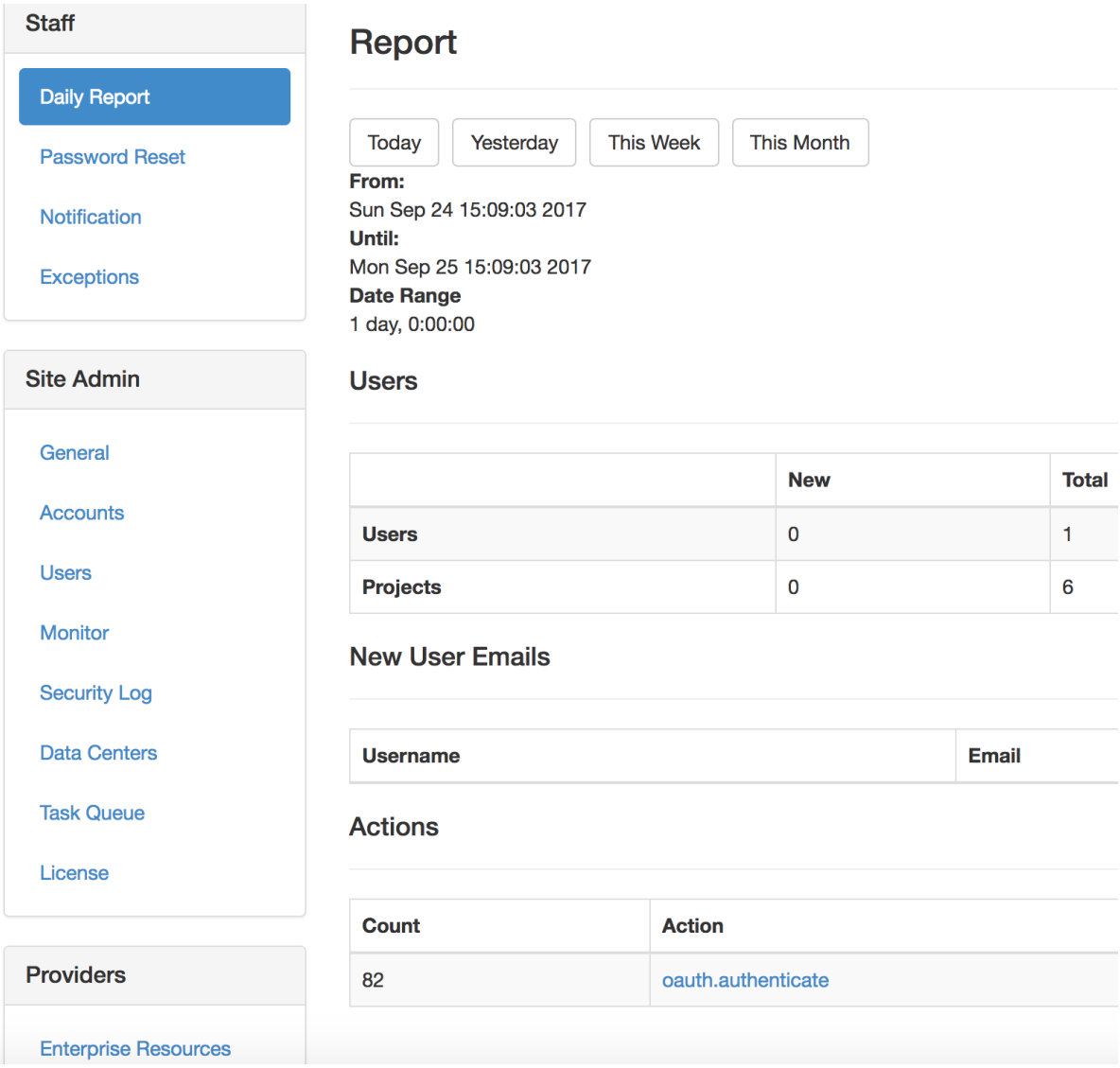
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



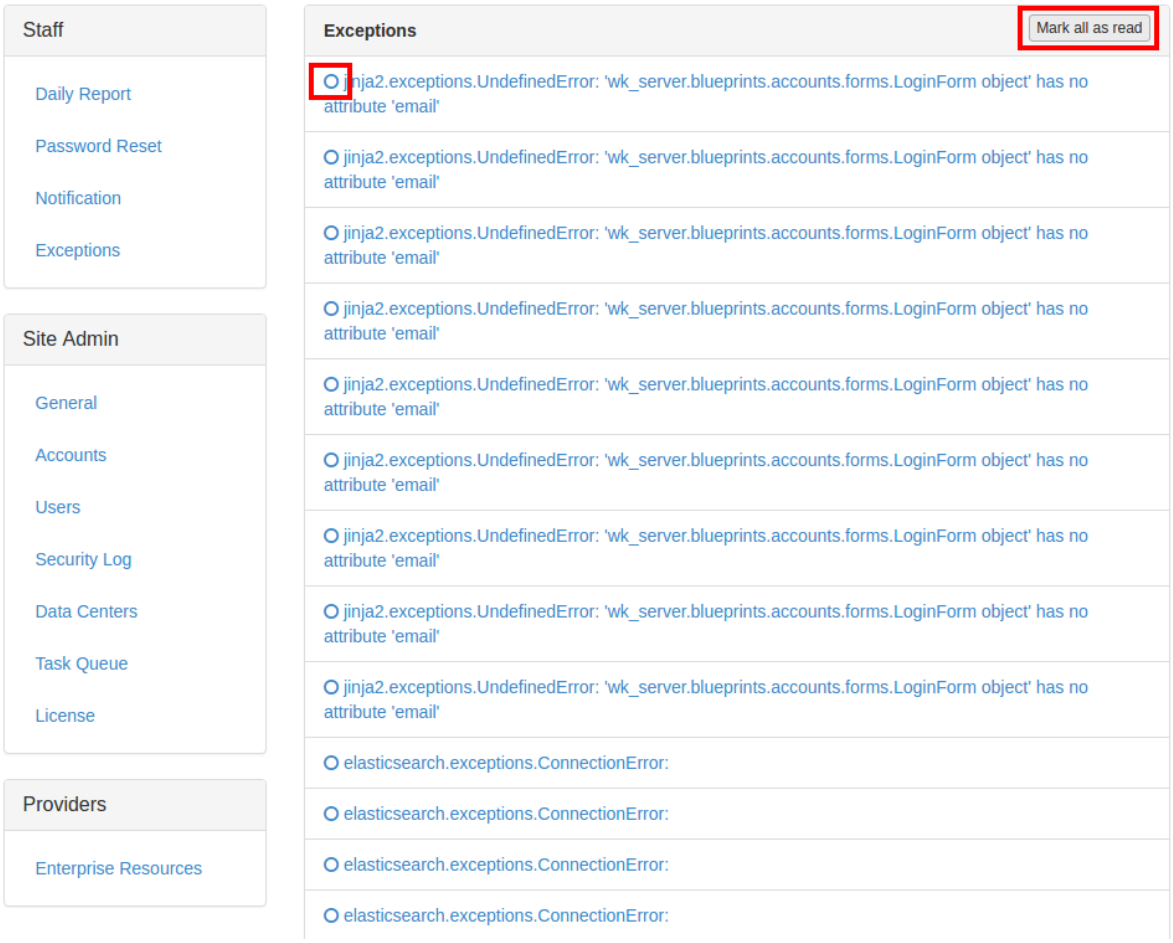
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

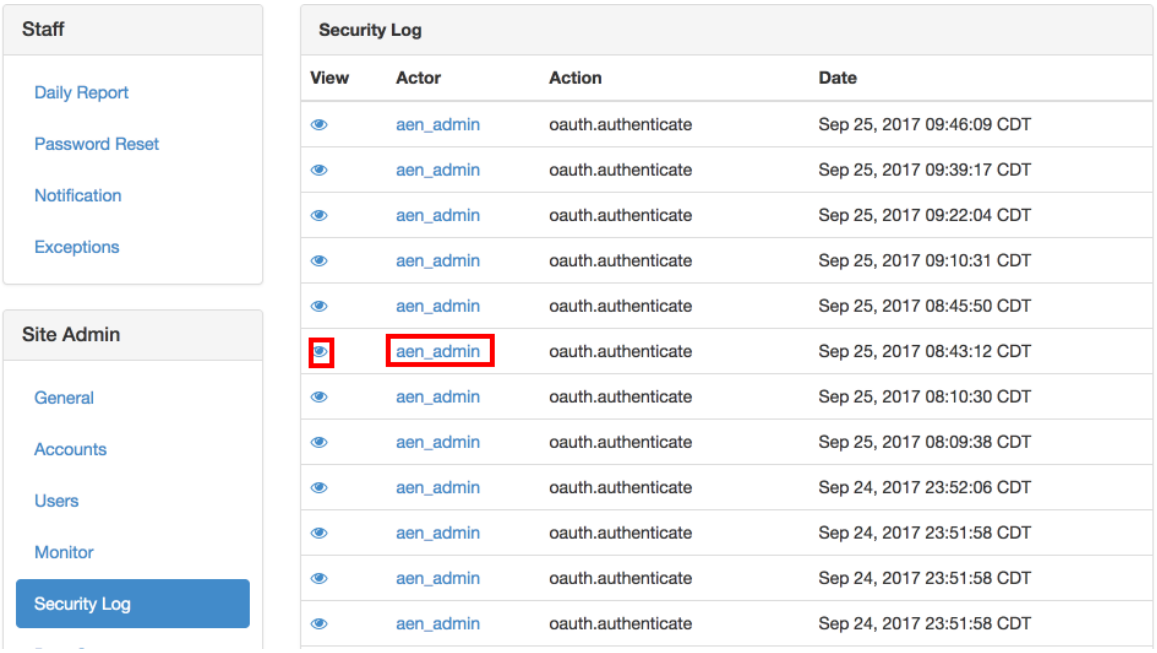
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

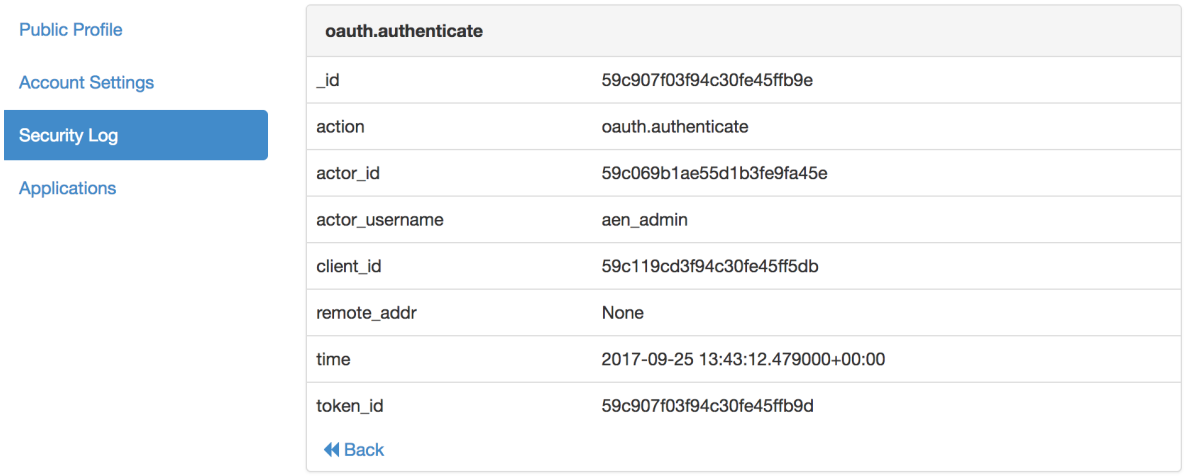
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

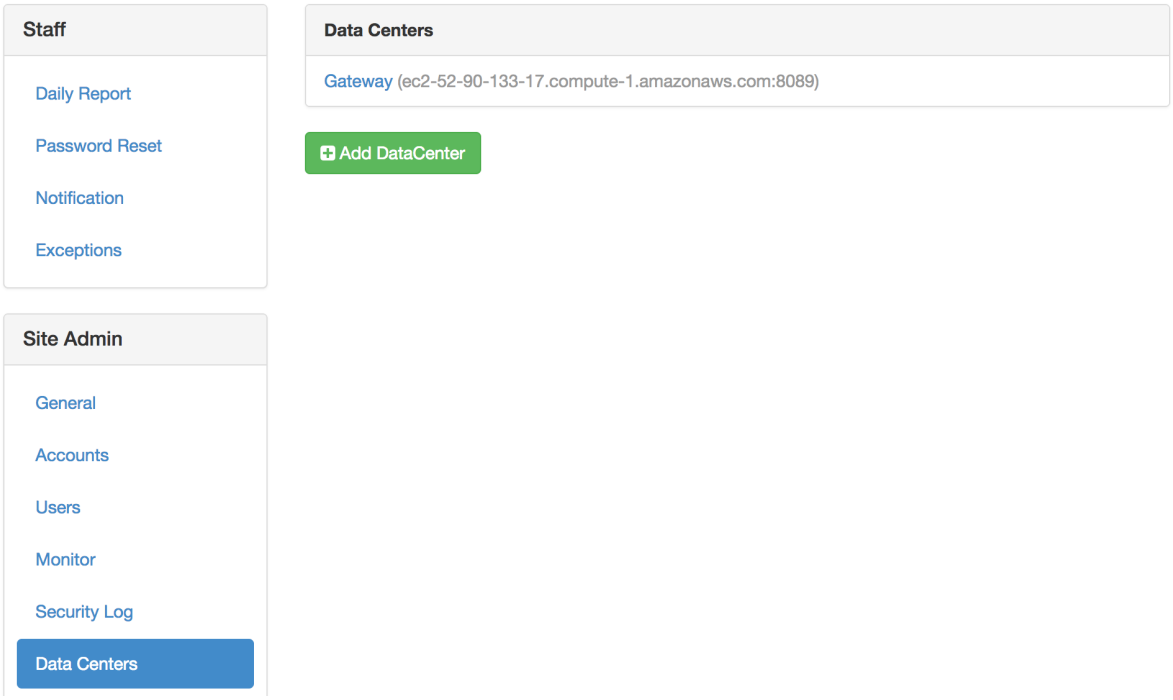
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

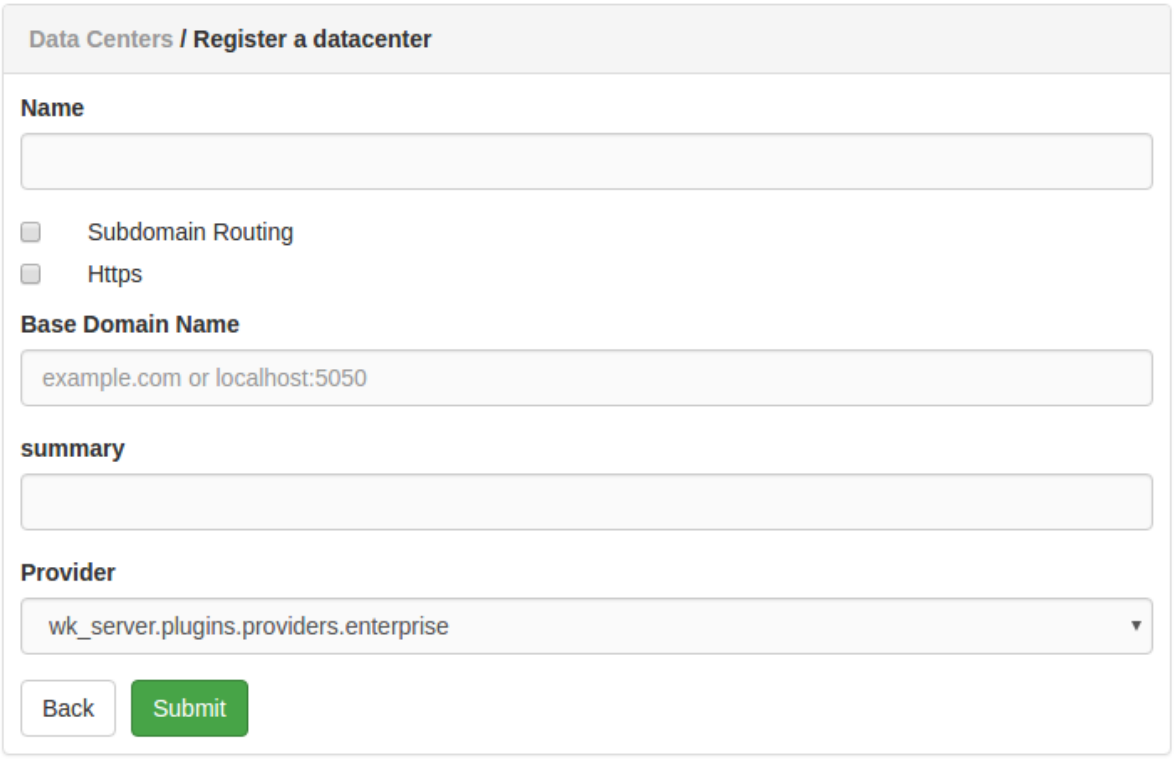
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

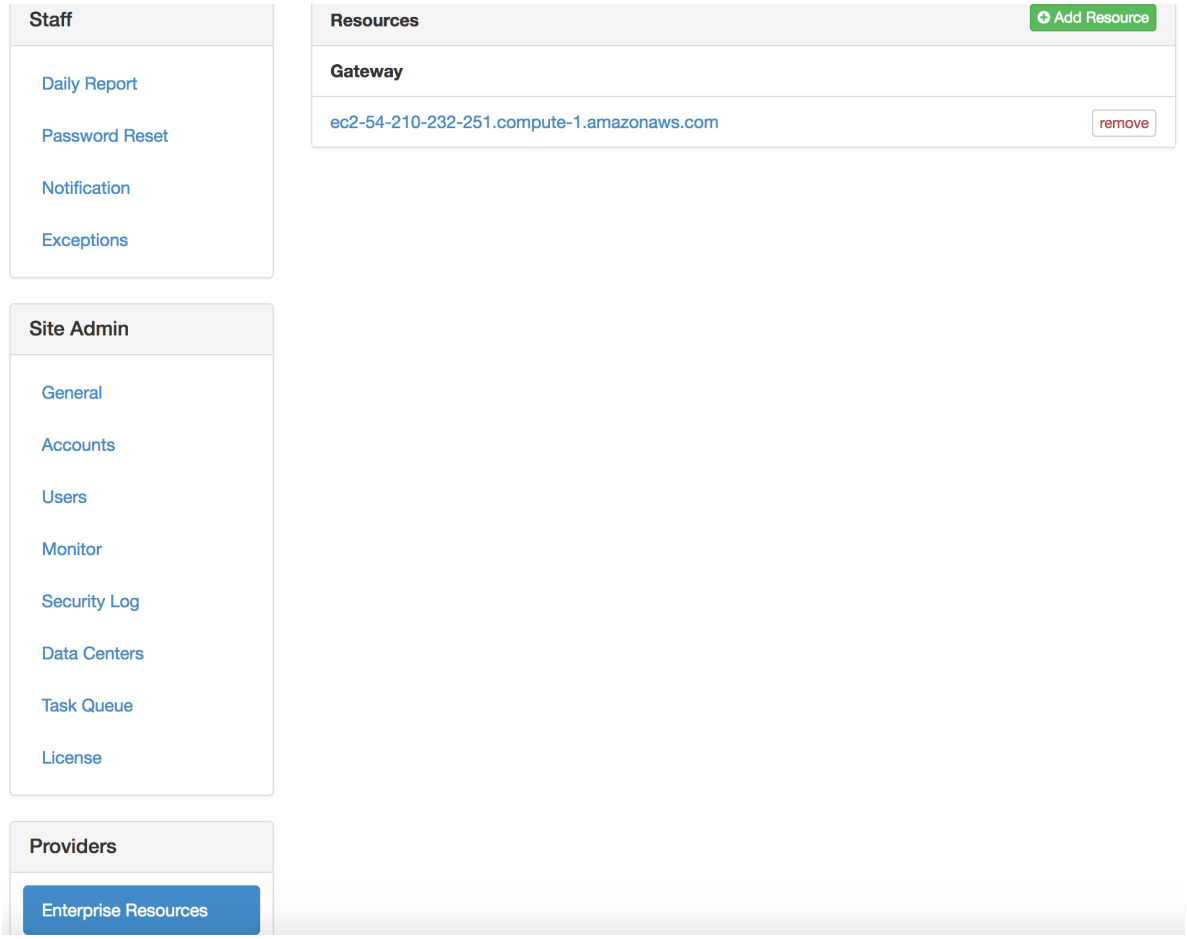
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

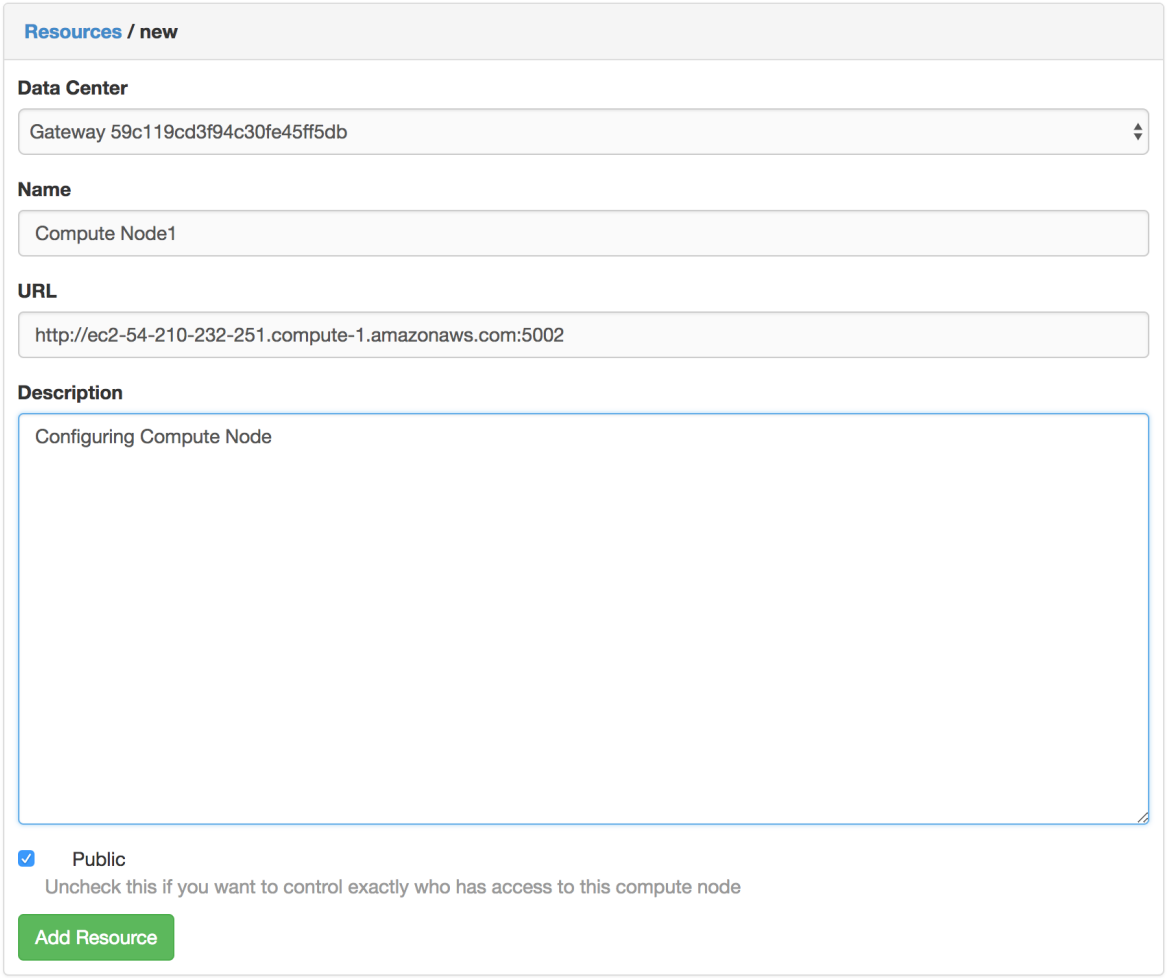
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

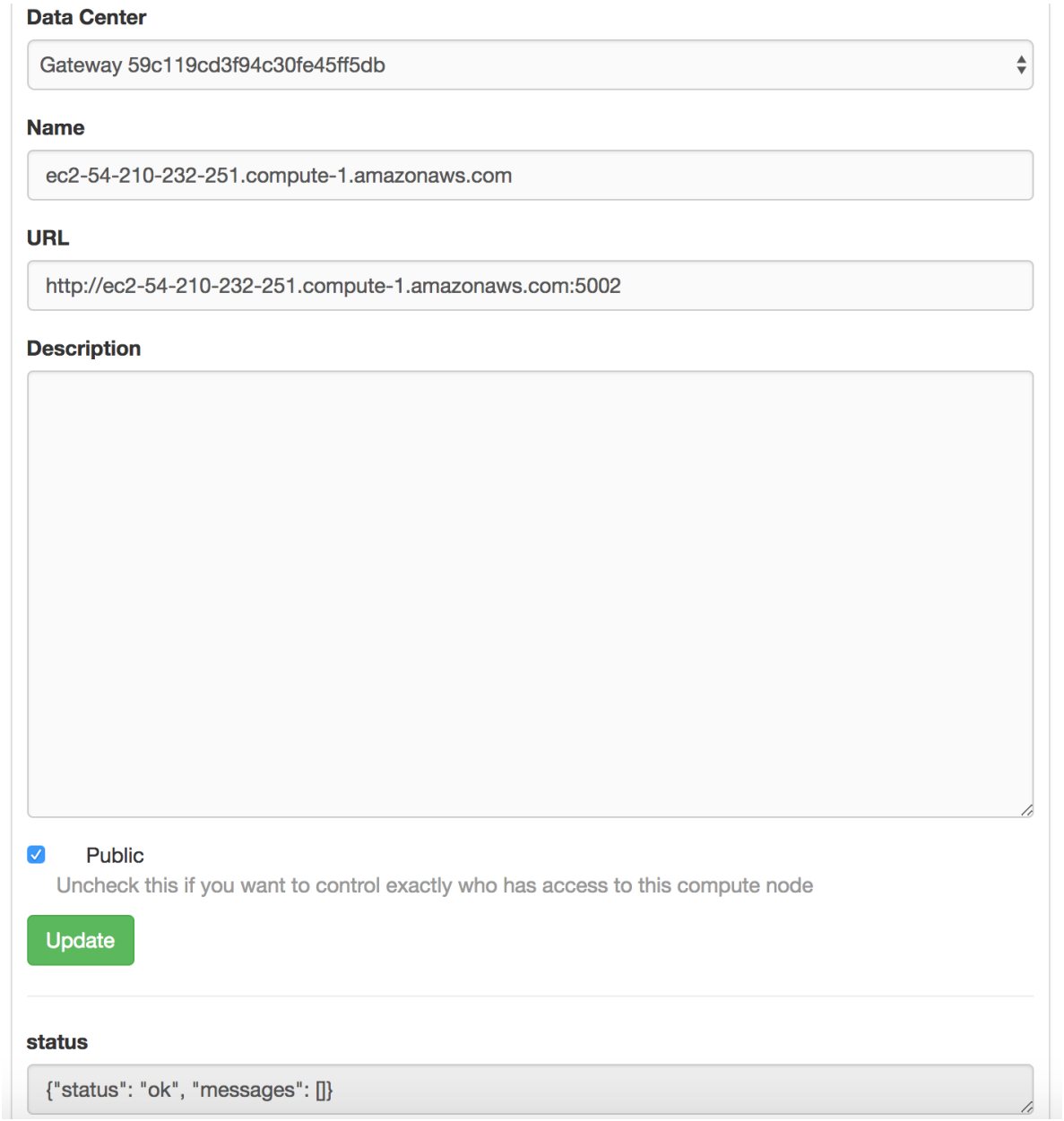
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

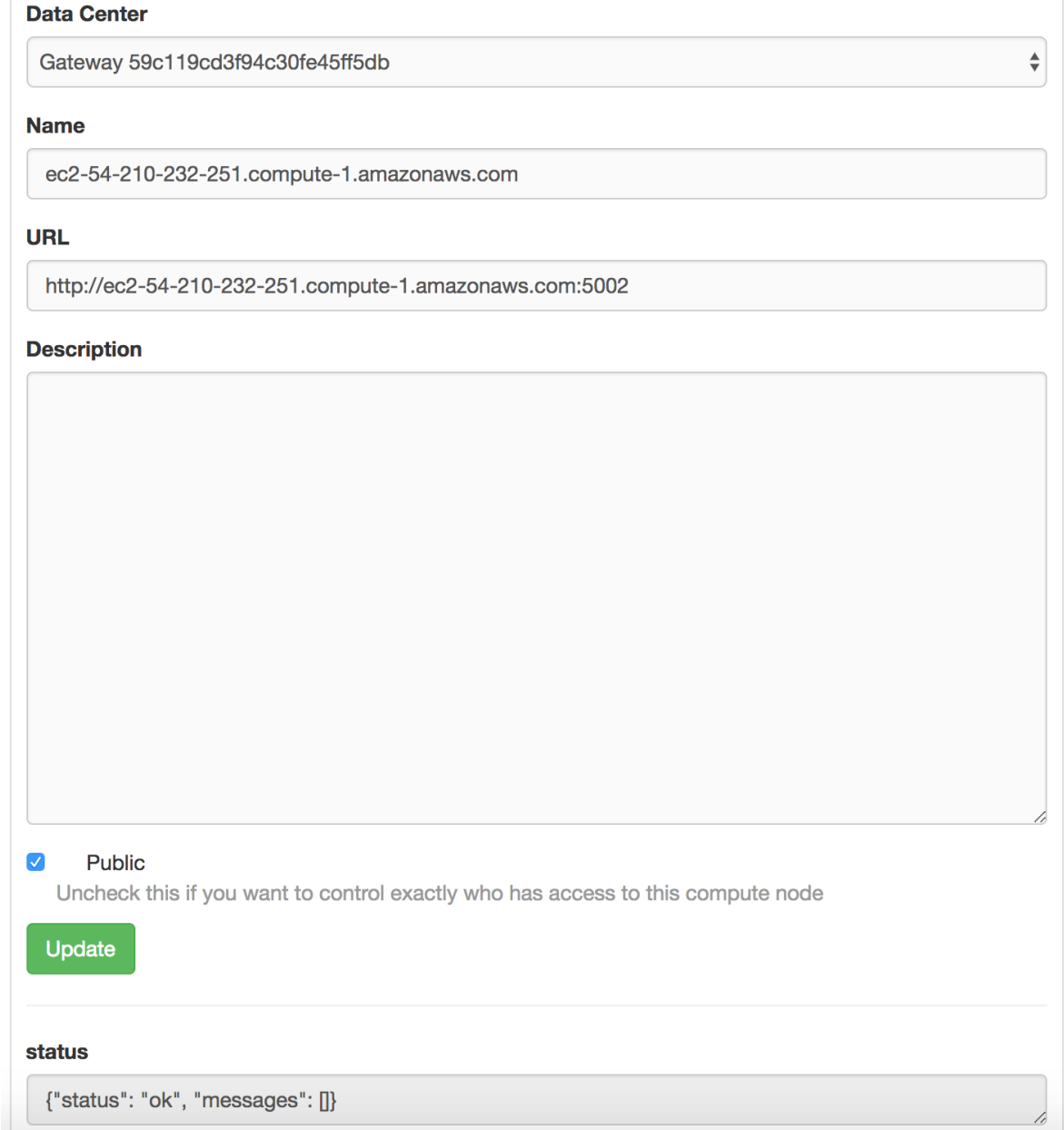
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, :doc: *move the project to a valid Compute Resource <../user-mgmt/move-project-to-compute-node>*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                        RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                           RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

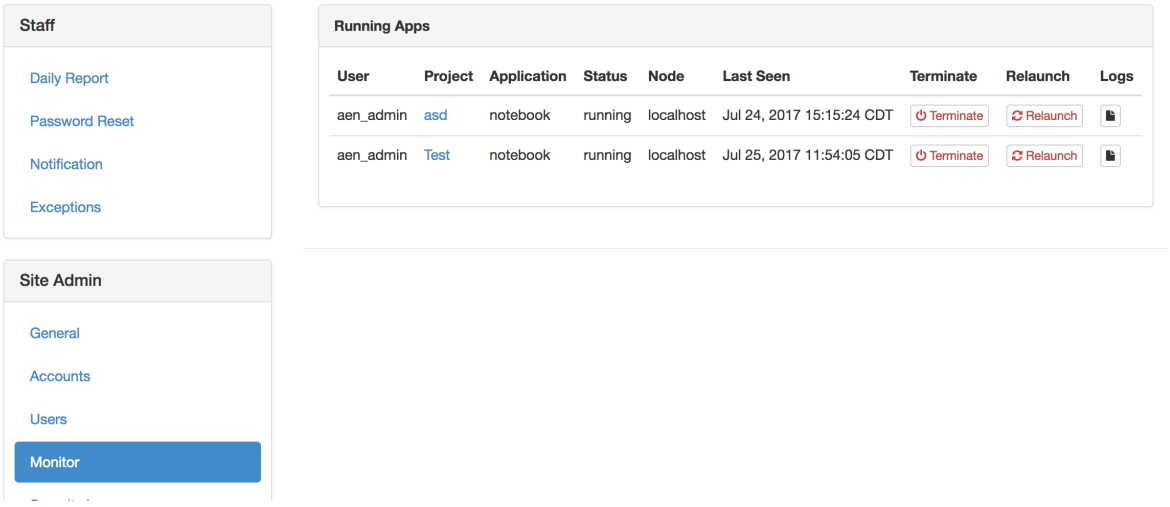
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

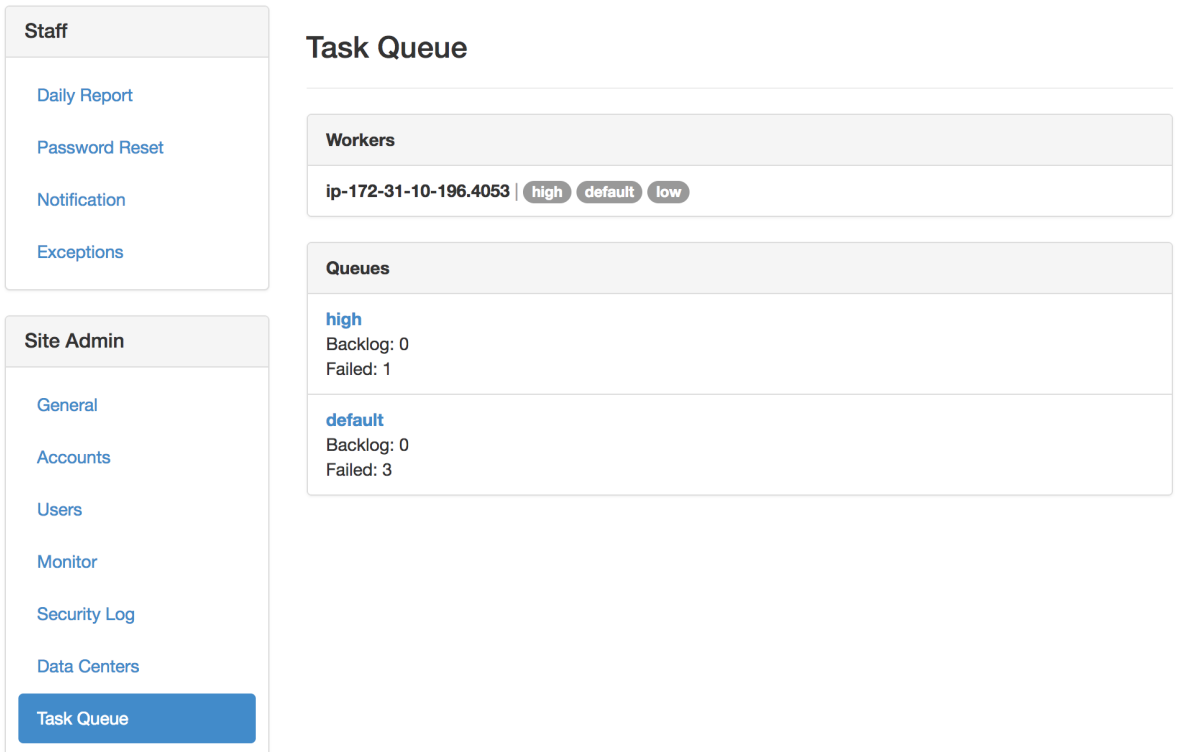
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

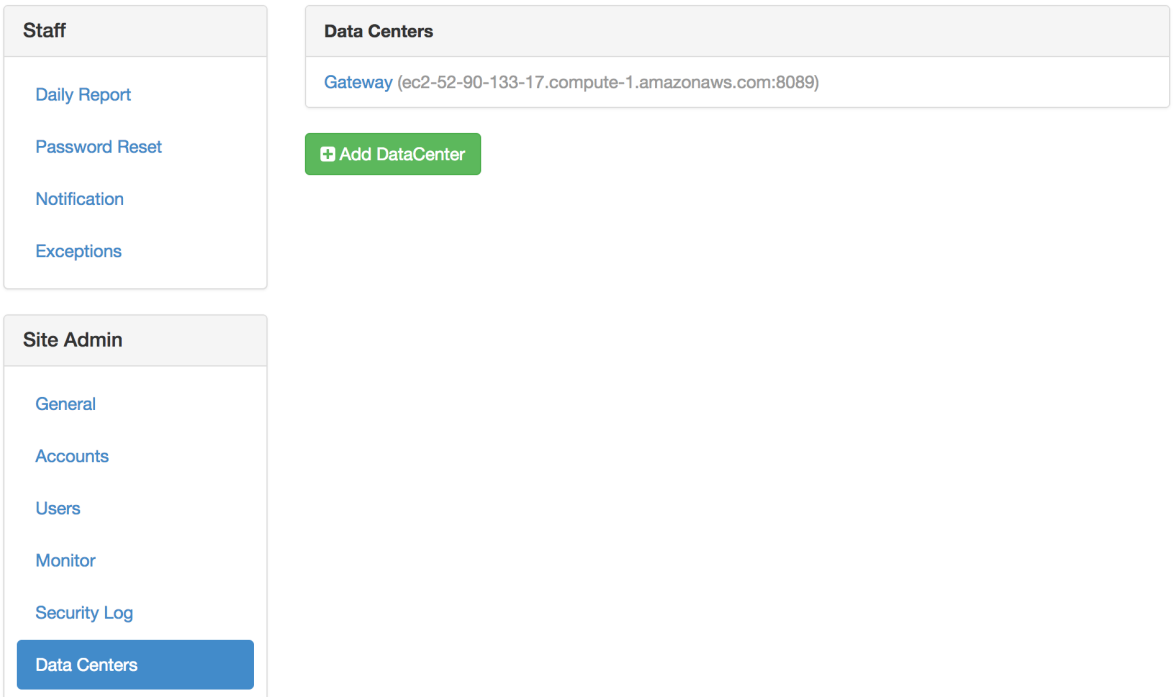
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



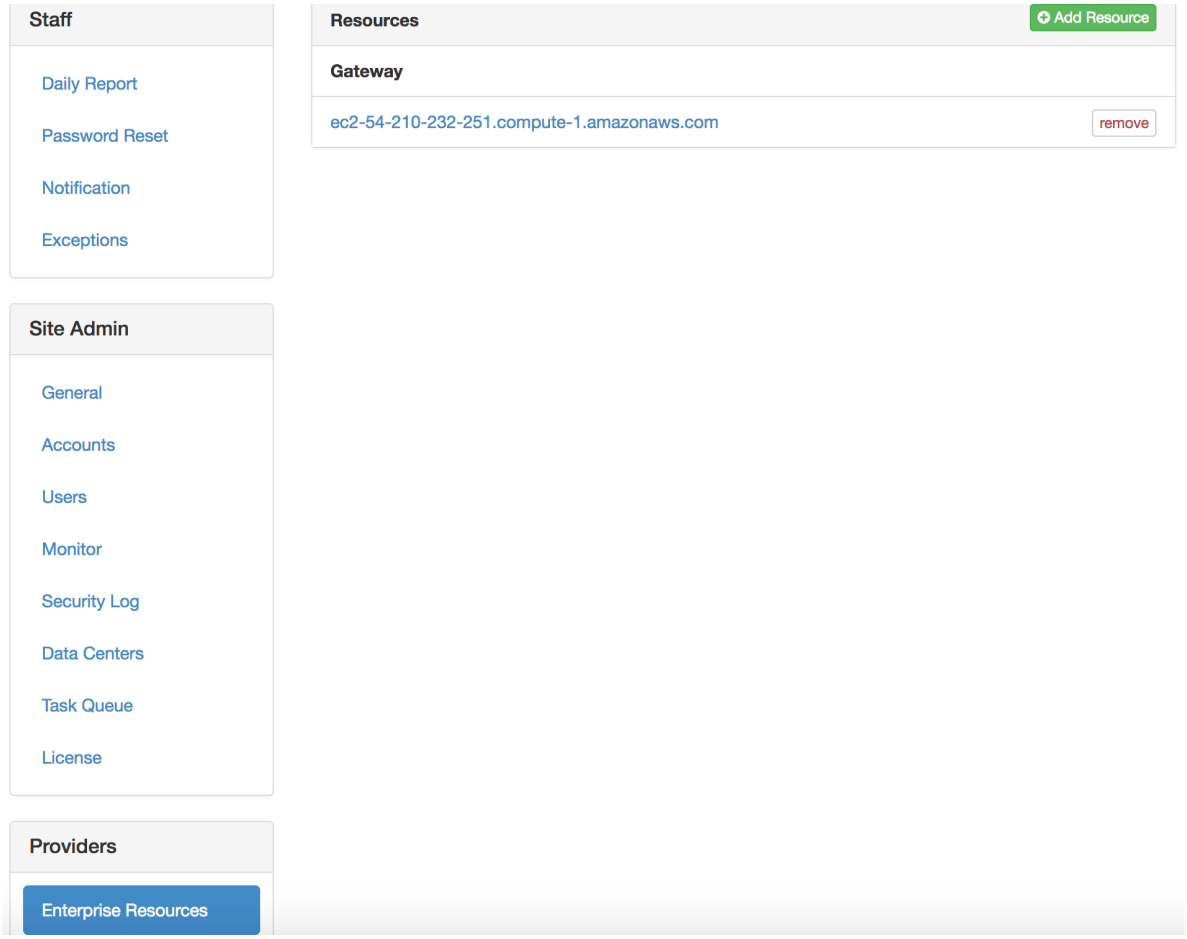
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

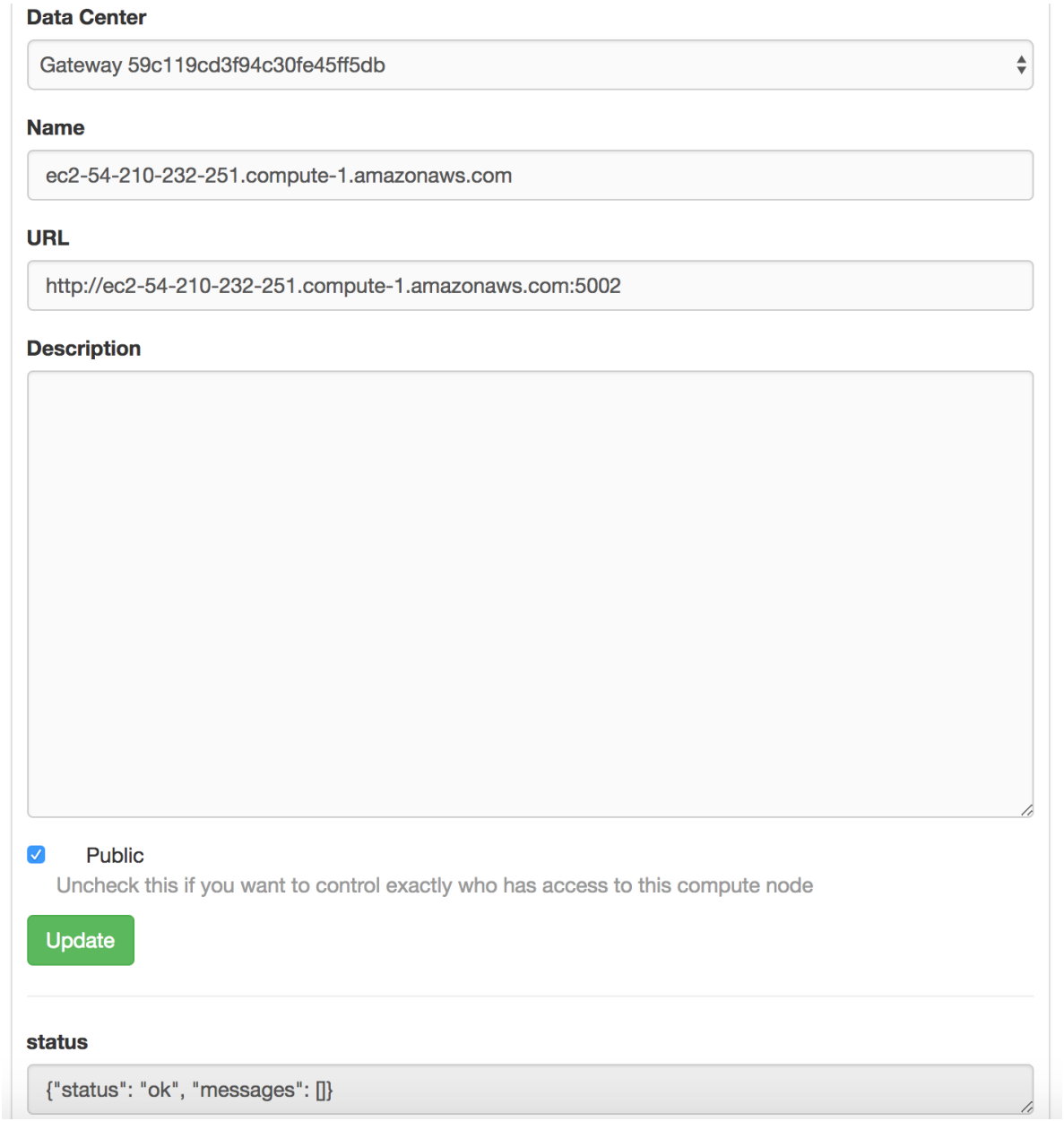
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

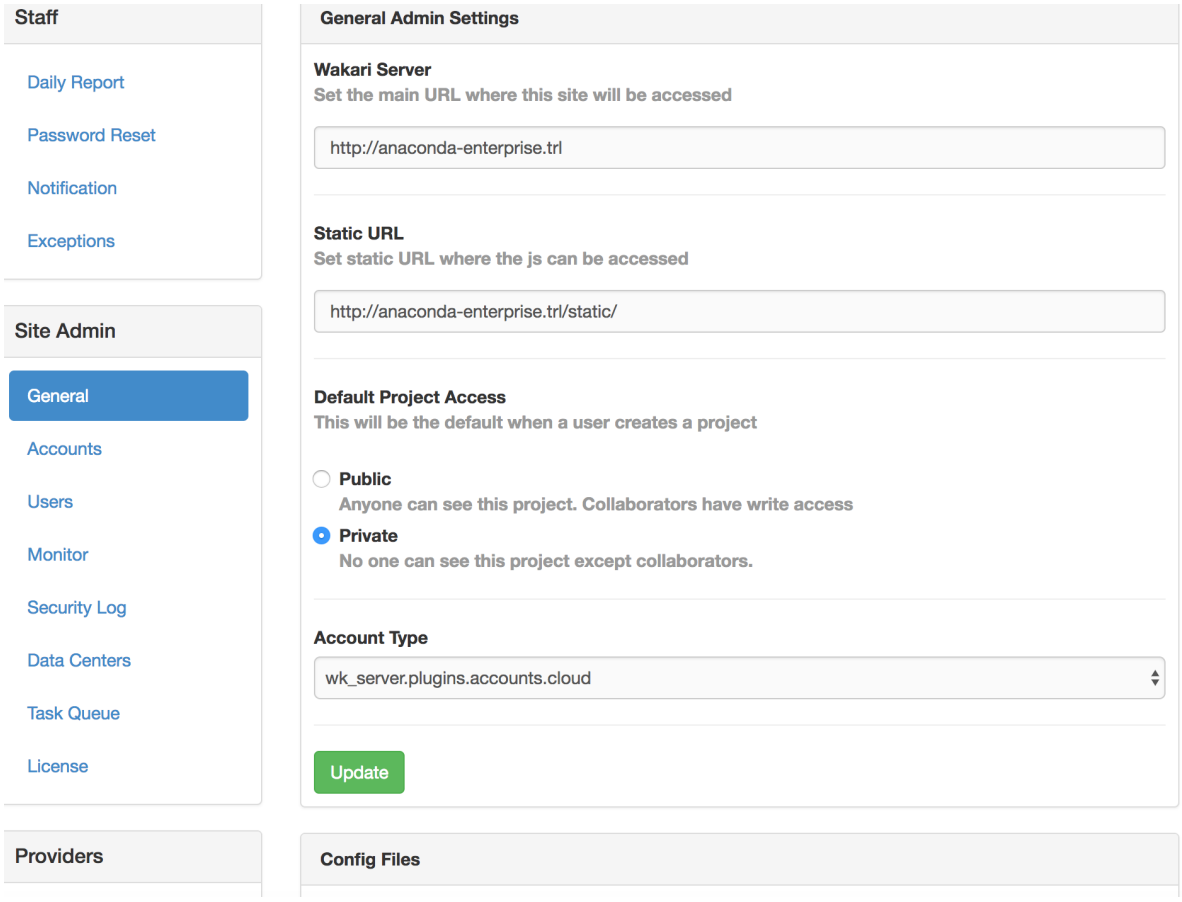
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

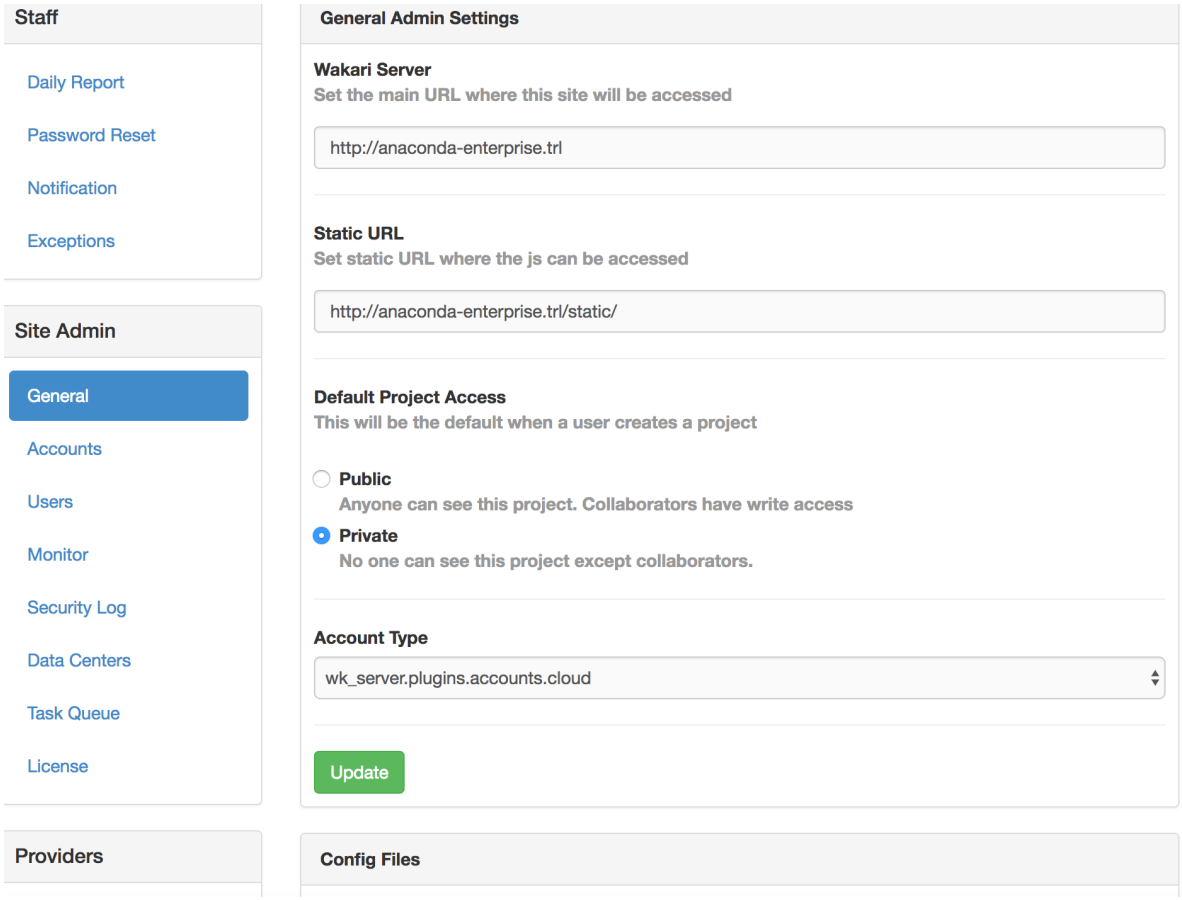
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

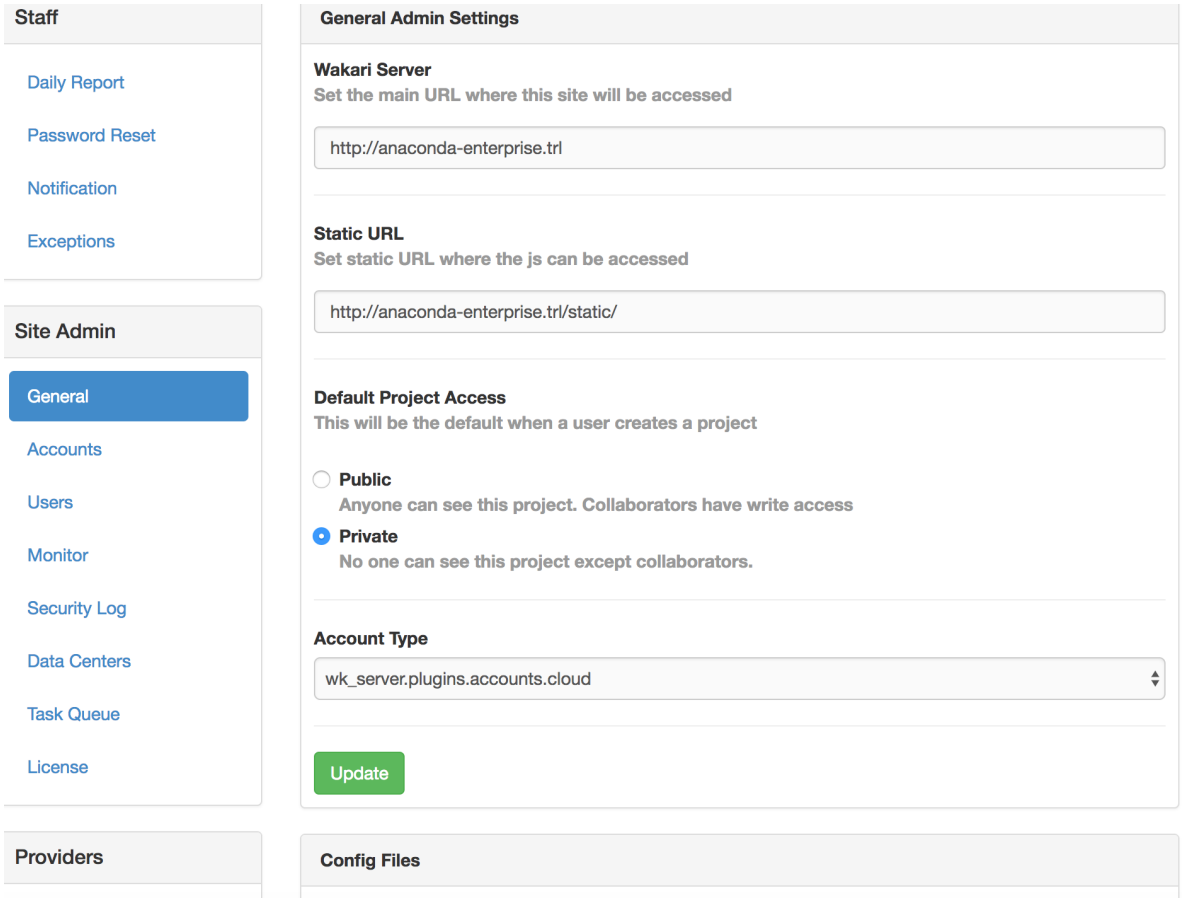
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

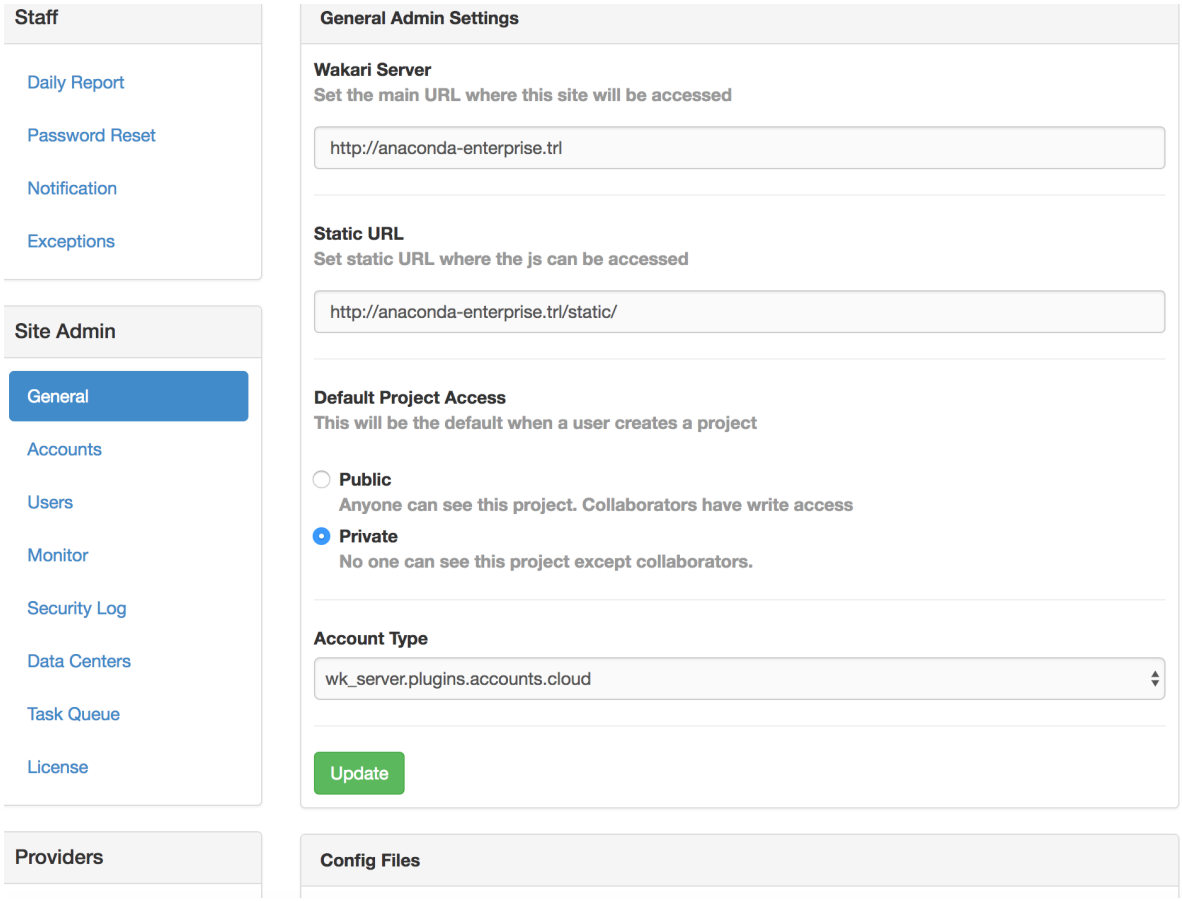
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

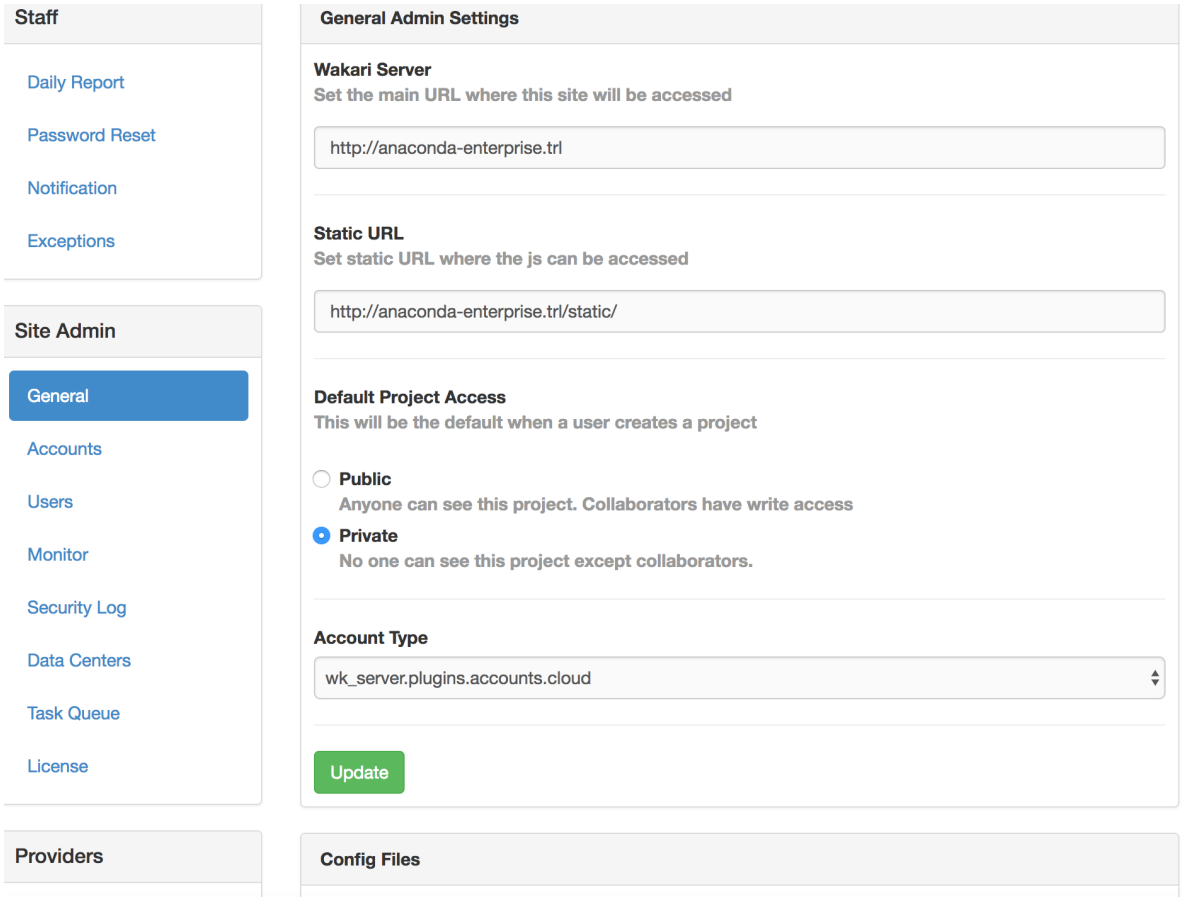
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

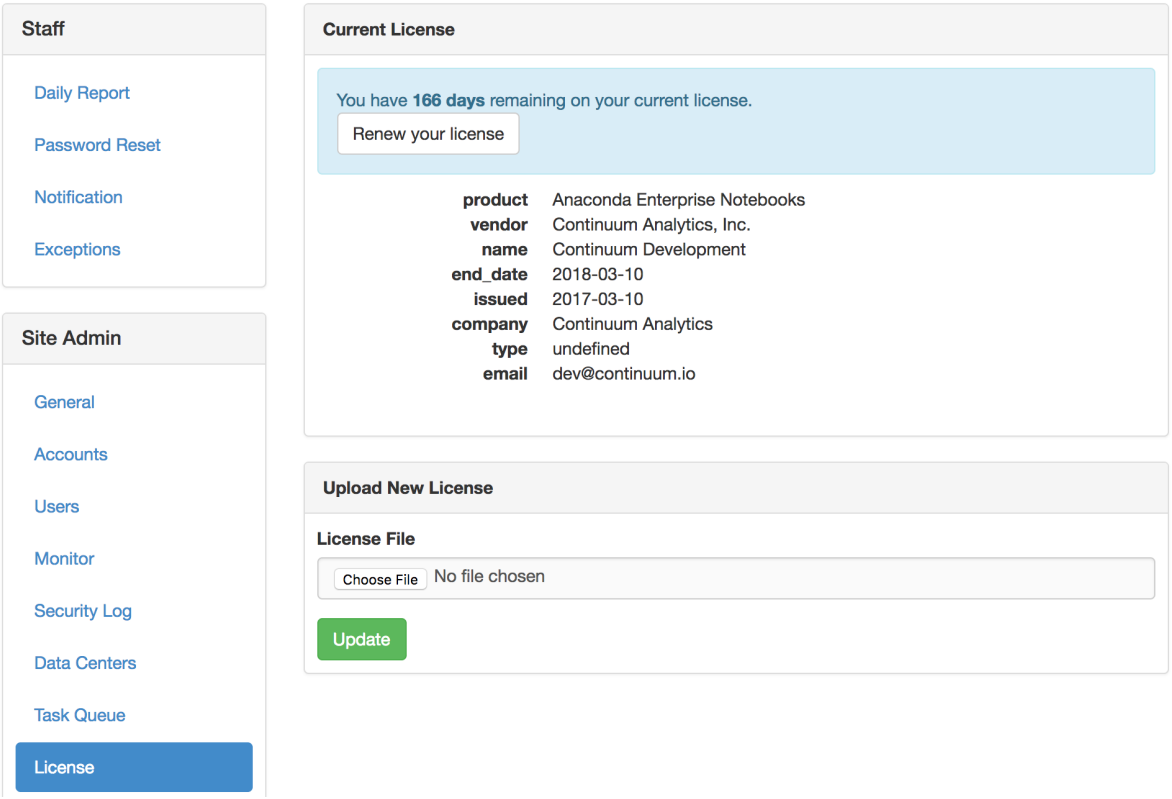
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.

7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.

3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise 4 Notebooks*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the AEN_SRVC_ACCT and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.3.1 March 25, 2019

Administrator-facing changes:

- Add option for server-side session management
- Add option to terminate terminal sessions on logout

Internal Fixes: - Set Secure and HTTPOnly flag on session cookies - Fix XSS vulnerability

v4.3.0 October 24, 2018

Administrator-facing changes:

- Fix bug where compute logging wasn't respecting the `logMaxFiles` key
- Log and display a descriptive error message when there is a problem creating the users index
- Log and display a descriptive error message when there is a problem creating a new user with a duplicated e-mail address when the `uniqueEmail` setting is enabled
- Add footer server pages with server host data (IP, AEN version and server version)
- Fix admin script to change the status of private projects
- Fix validation error when updating/editing an existing resource
- Docs: Add KB article about using MongoDB to update old projects with new Data Center information
- Docs: Add restarting service step to SSO documentation
- Docs: Add support for newer versions of MongoDB
- Docs: Add documentation on `uniqueEmail`
- Docs: Add `projDirsAsHome` key to config docs
- Docs: Rewrite the "Using project directories as home directories" section
- Docs: Add full path to admin commands
- Docs: Warn about upgrading away from tested pkgs
- Docs: Add missing steps to "Authenticating with LDAP" section

- Docs: Add troubleshooting documentation about orphaned projects
- Docs: Warn about not using IP address when you connect to AEN
- Docs: Add an entry about 'Error starting projects' in the troubleshooting page
- Docs: Rewrite "Group and user permissions for NFS" section and description of the `identicalGID` key in the config pages
- Docs: Add a new section about using MRO packages in AEN (Update: MRO was discontinued in 2021)
- Docs: Preserve username capitalization when using LDAP/AD
- Docs: Add umask 0022 to security requirements
- Docs: Add new section about changing install location
- Docs: Add note about how to manually break out Root CA for the gateway
- Docs: Add note about upgrading custom environments
- Docs: Add notes about how to find conda config files inside AEN
- Docs: Add note about using `USE_SERVER_BASED_SESSIONS: false` when configuring SSO between AEN and versions 2.33.3 through 2.33.10 of the Repository

User-facing changes:

- Increase Workbench file upload limit
- Fix Bokeh examples
- Extend `nb_locker` to detect a server disconnection and generate an alert if it occurs
- Docs: Update the notebook app to correctly point to AEN docs
- Docs: Emphasize that permissions are not applied recursively in the workbench

Internal fixes:

- Update Nginx version to v1.12.2
- Remove unused server config file during the compute upgrade process
- Remove already defined compute default settings from the post-script step
- Pin widgetsnbextension version to prevent version mismatch issue (ipywidgets)
- Remove `--offline` flag from the conda clone operations
- Support MongoDB 3.4.14 and update pymongo to version 3.2.2
- Fix LDAP username case sensitivity
- Security fixes and enhancements

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs

- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7
- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date
- Server: Fix bug Monitor Report blank
- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected "ca" key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes
- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace 'wakari' wording
- New config option to move the user's home directory into the user's project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user's home directory into the user's project directory
- Package cache was moved from user's home directory into the user's project directory
- Change wakari logos to Anaconda logos
- Fix error for deleting tags to work
- Define shell prompt in `.projectrc` template
- Replace 'wakari' wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile
- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application
- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove “wakari” word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair “Create Account” link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating
- Compute resource: Show full path to log file
- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes

- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation
- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089
- Added support for all-numeric usernames
- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher

- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.
- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes
- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Previous versions

Documentation for previous versions of AEN is provided for users who have not yet upgraded to the latest version. See the sidebar for links to other documentation versions.

Anaconda Enterprise 4 Notebooks

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.3.0, released October 24th, 2018.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

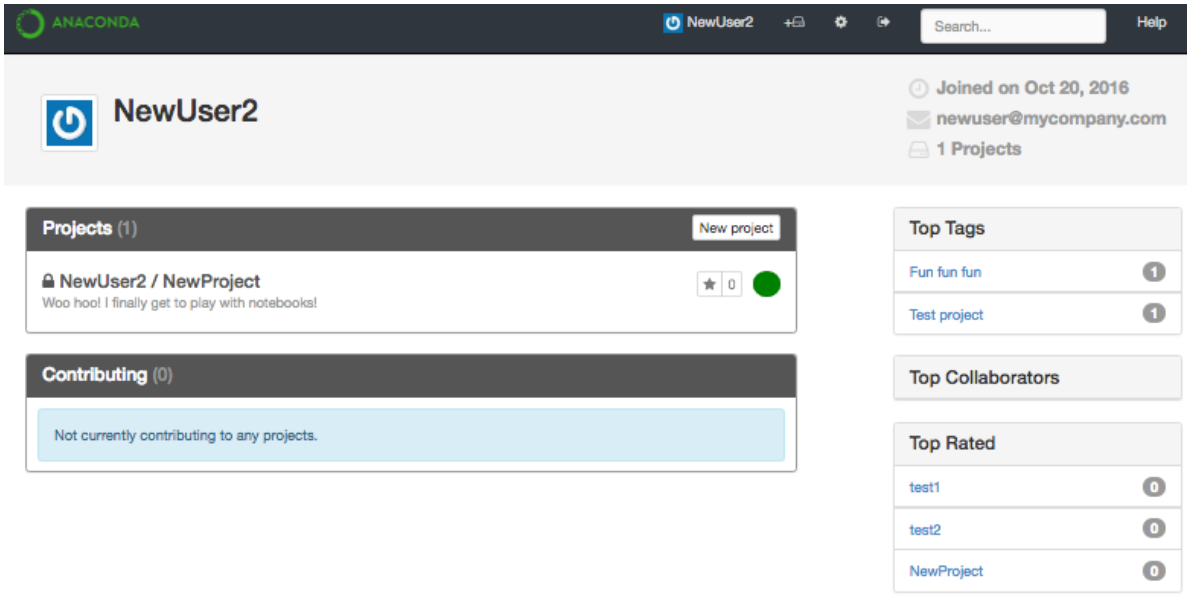
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

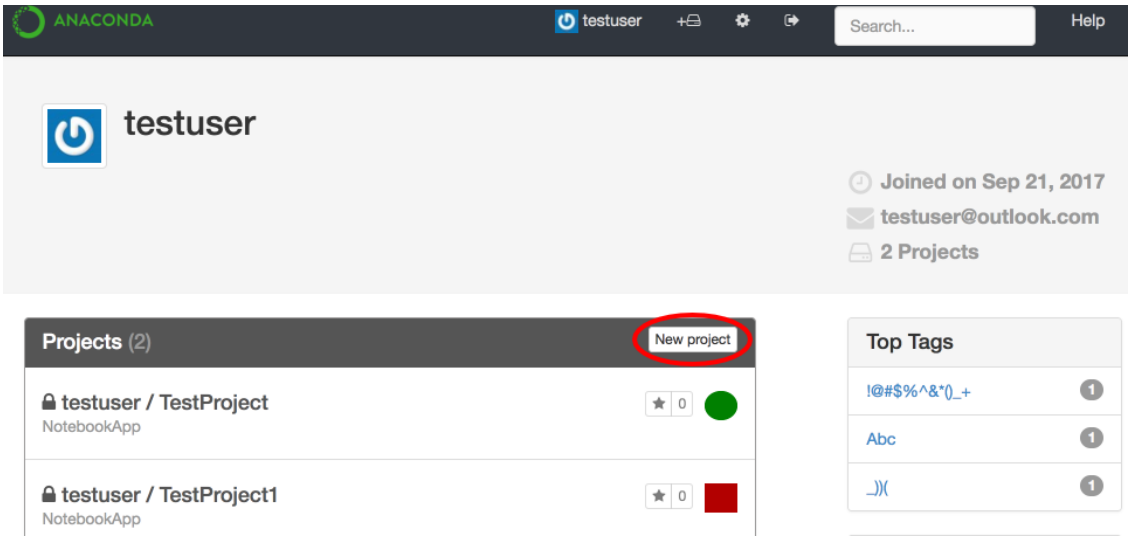
   Your user home page, where all good things happen, is displayed:



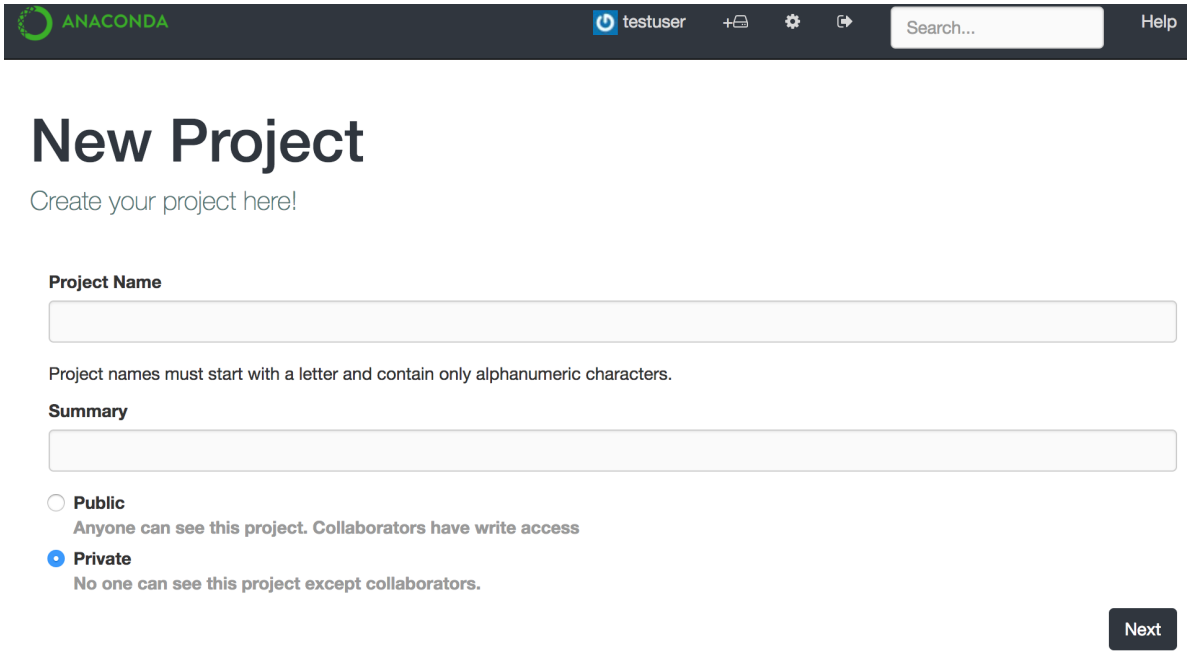
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as “Testing.”

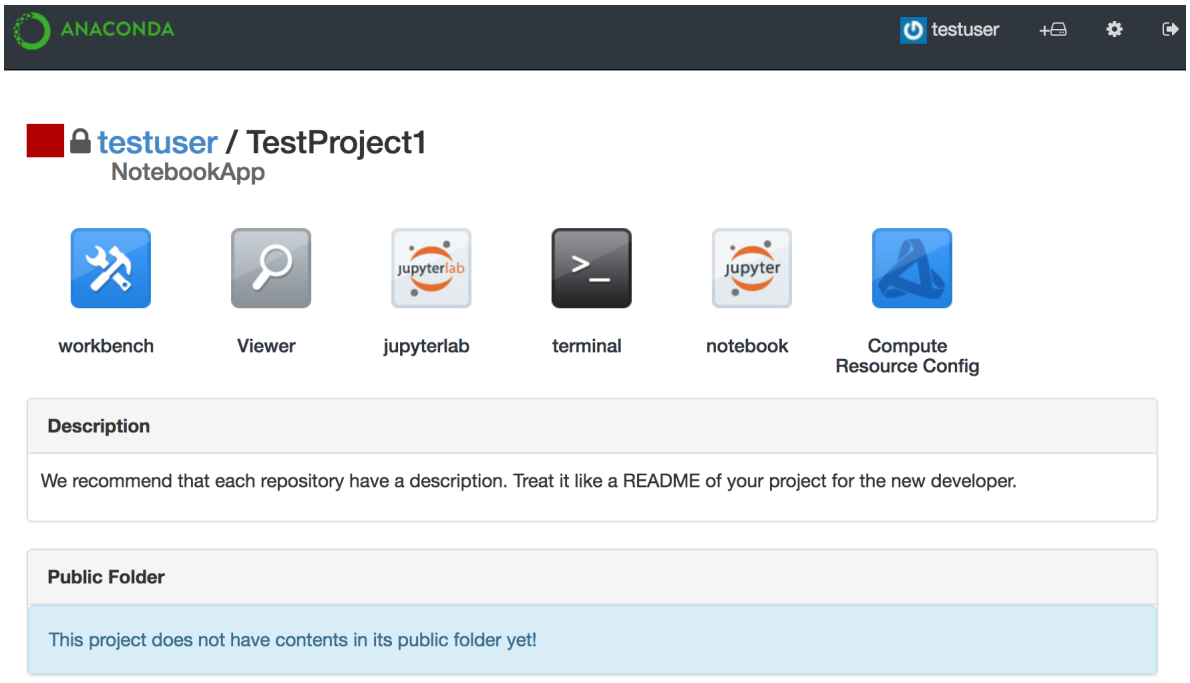


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

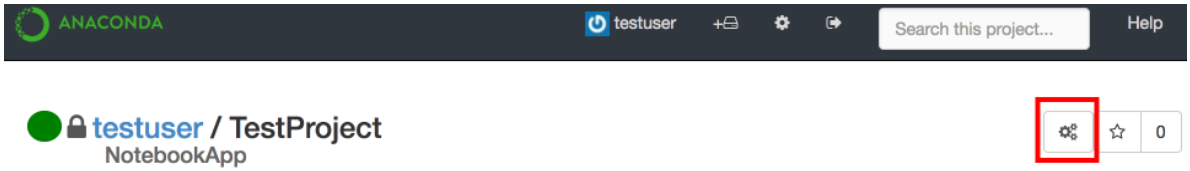
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

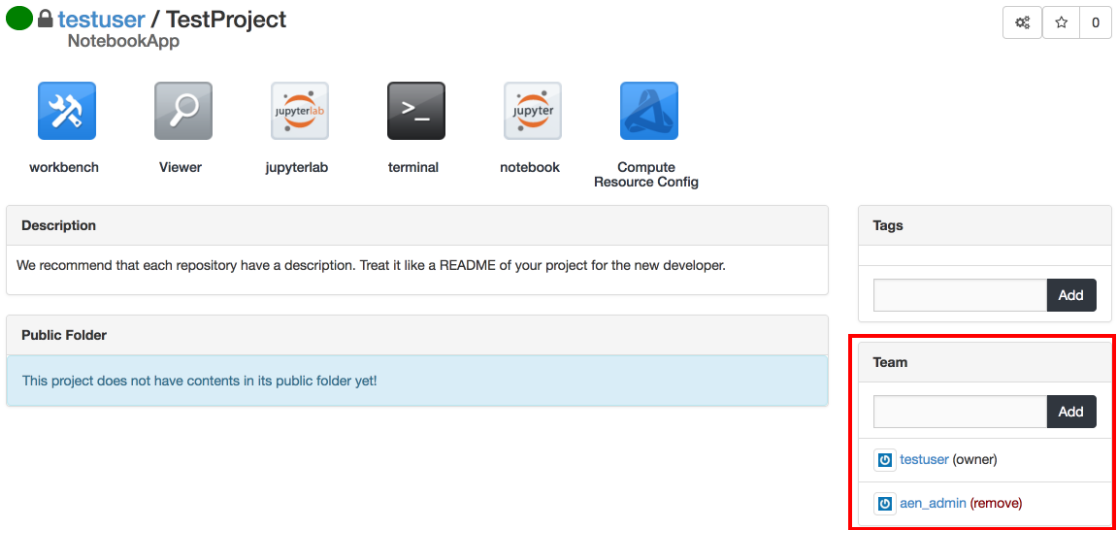
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

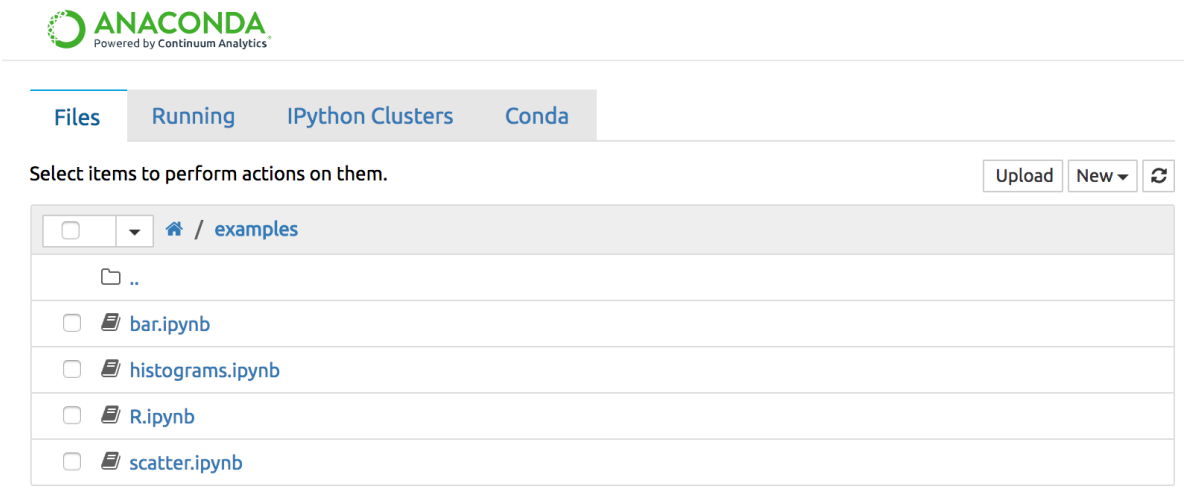


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

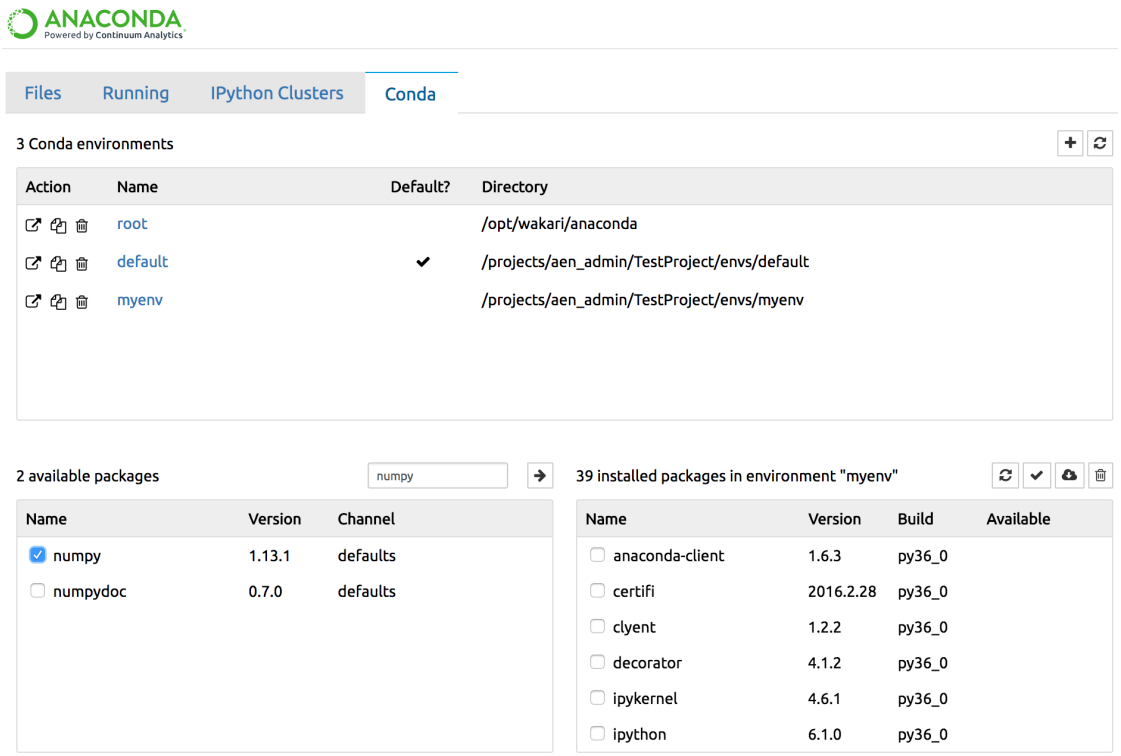
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



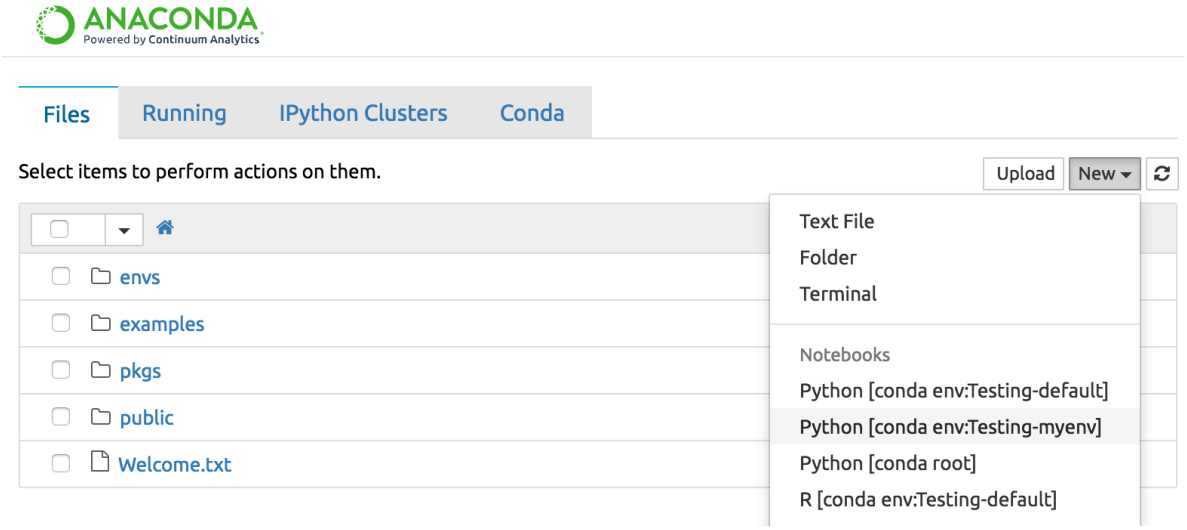
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



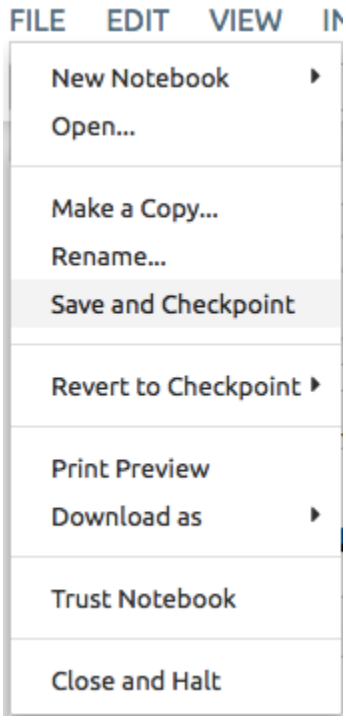
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

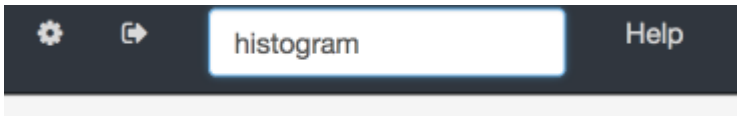
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

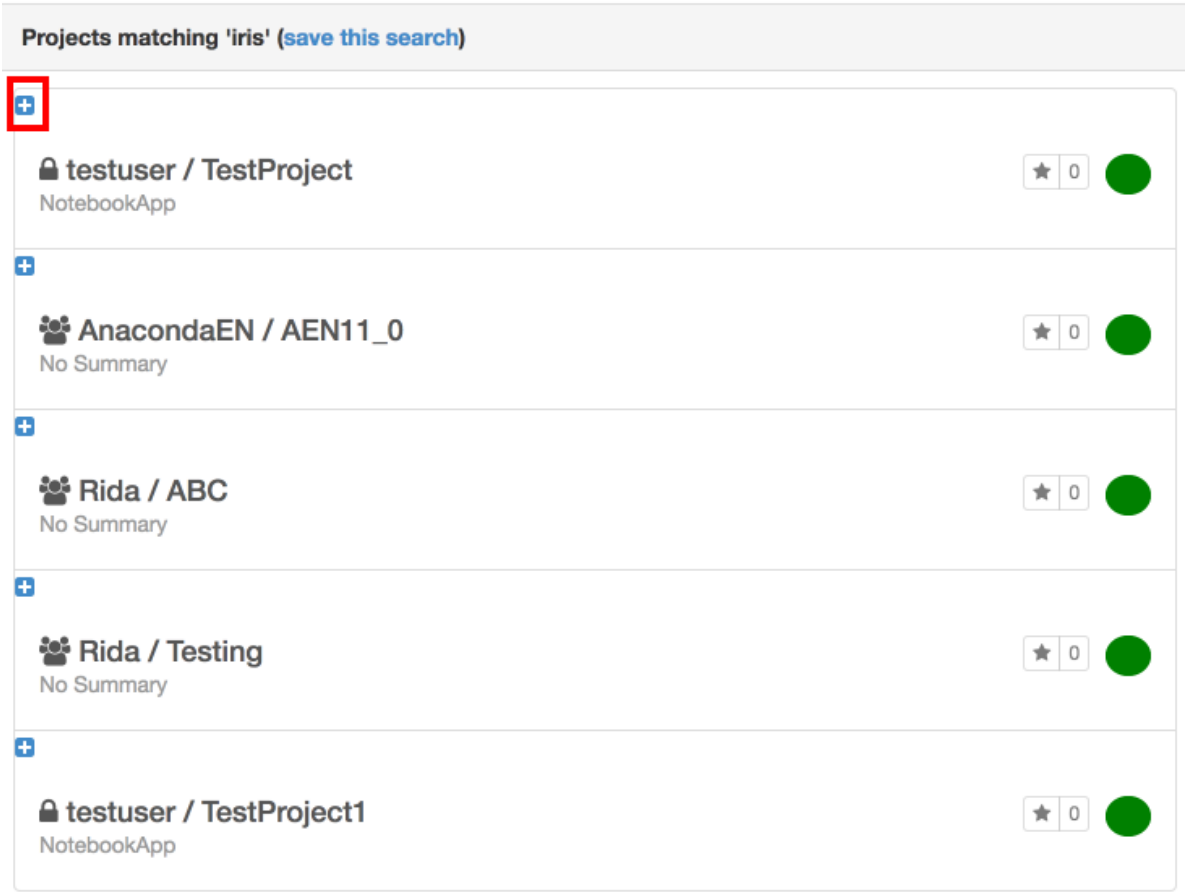
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

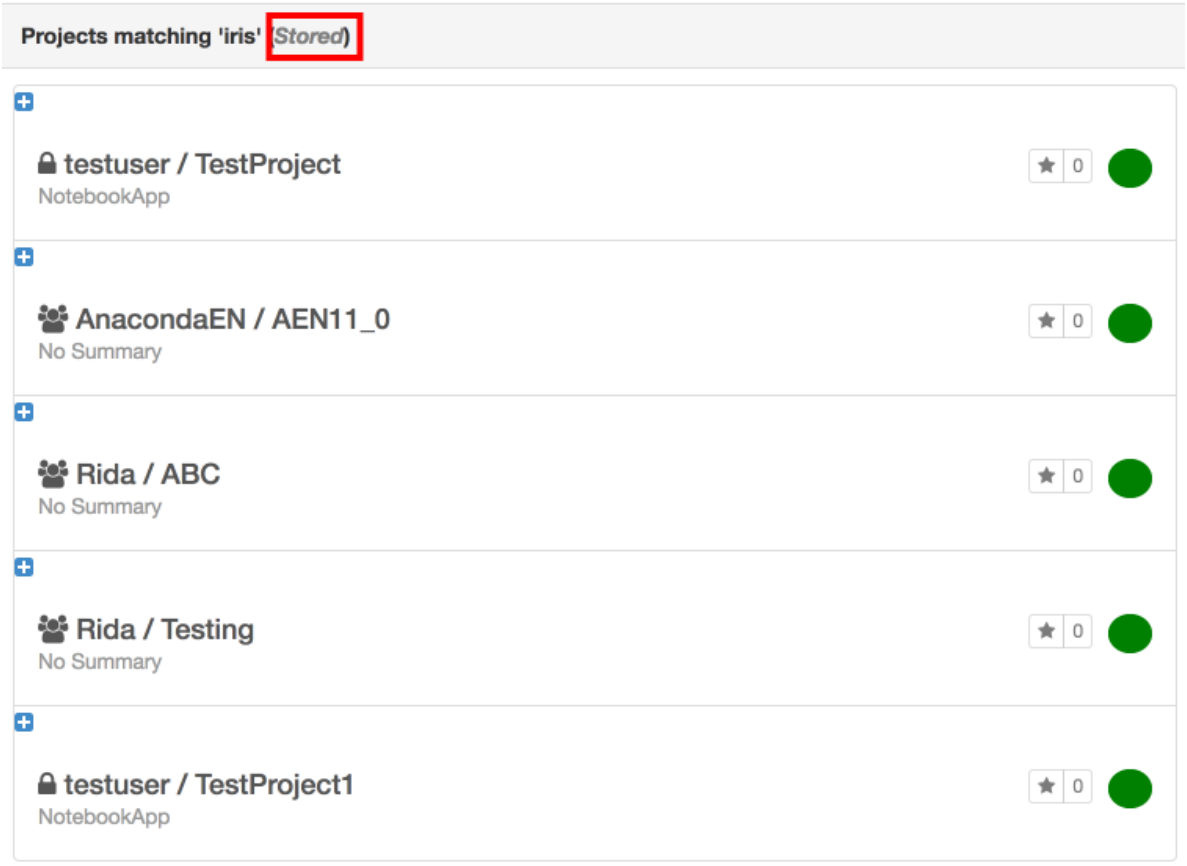


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

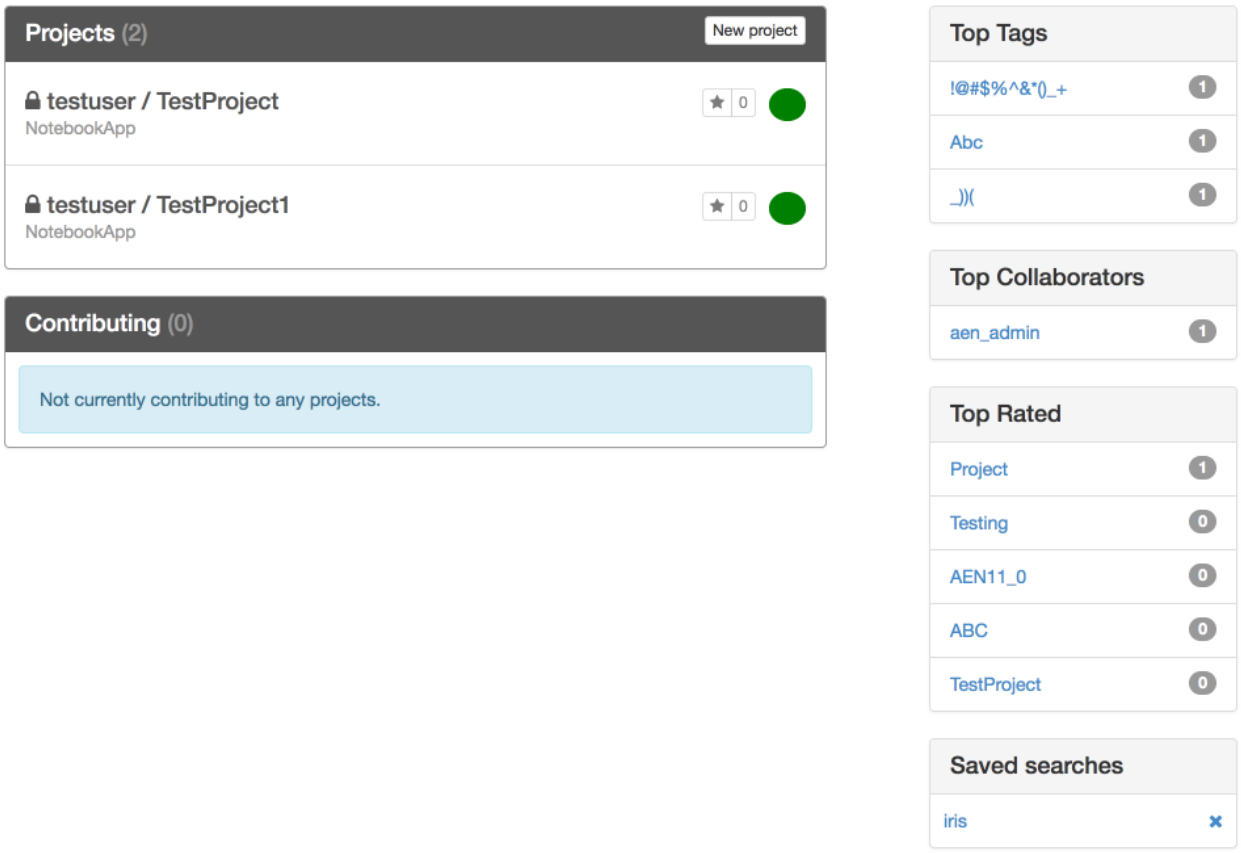
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

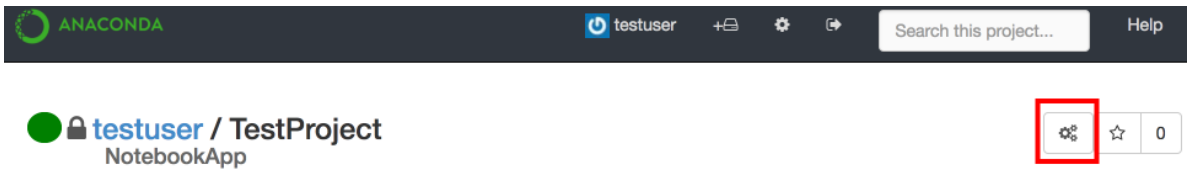
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:

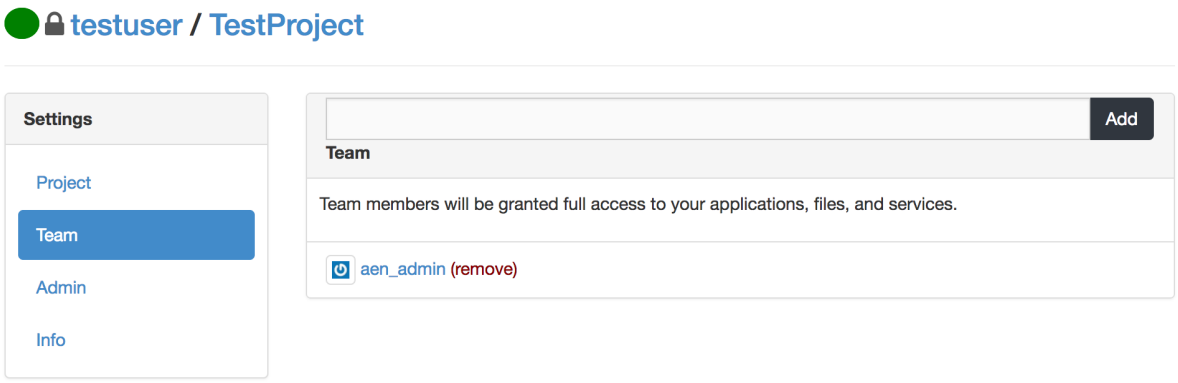


Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.



Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

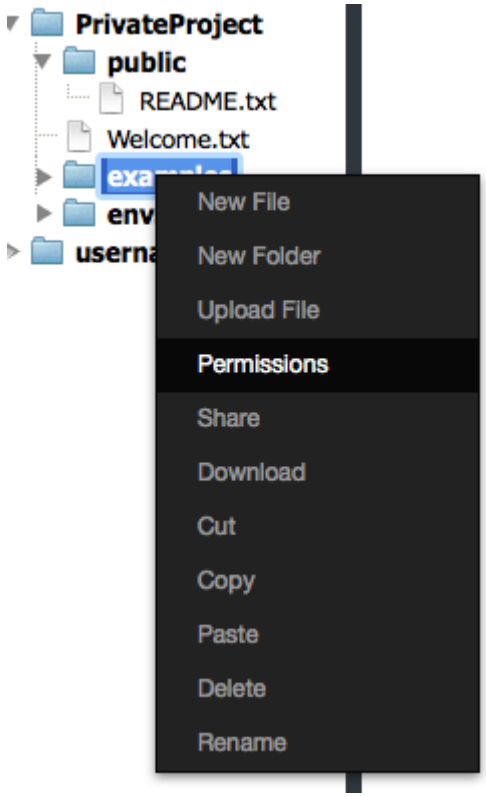
By default, all of the team members on a project have read and write access permissions for all project assets.

The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

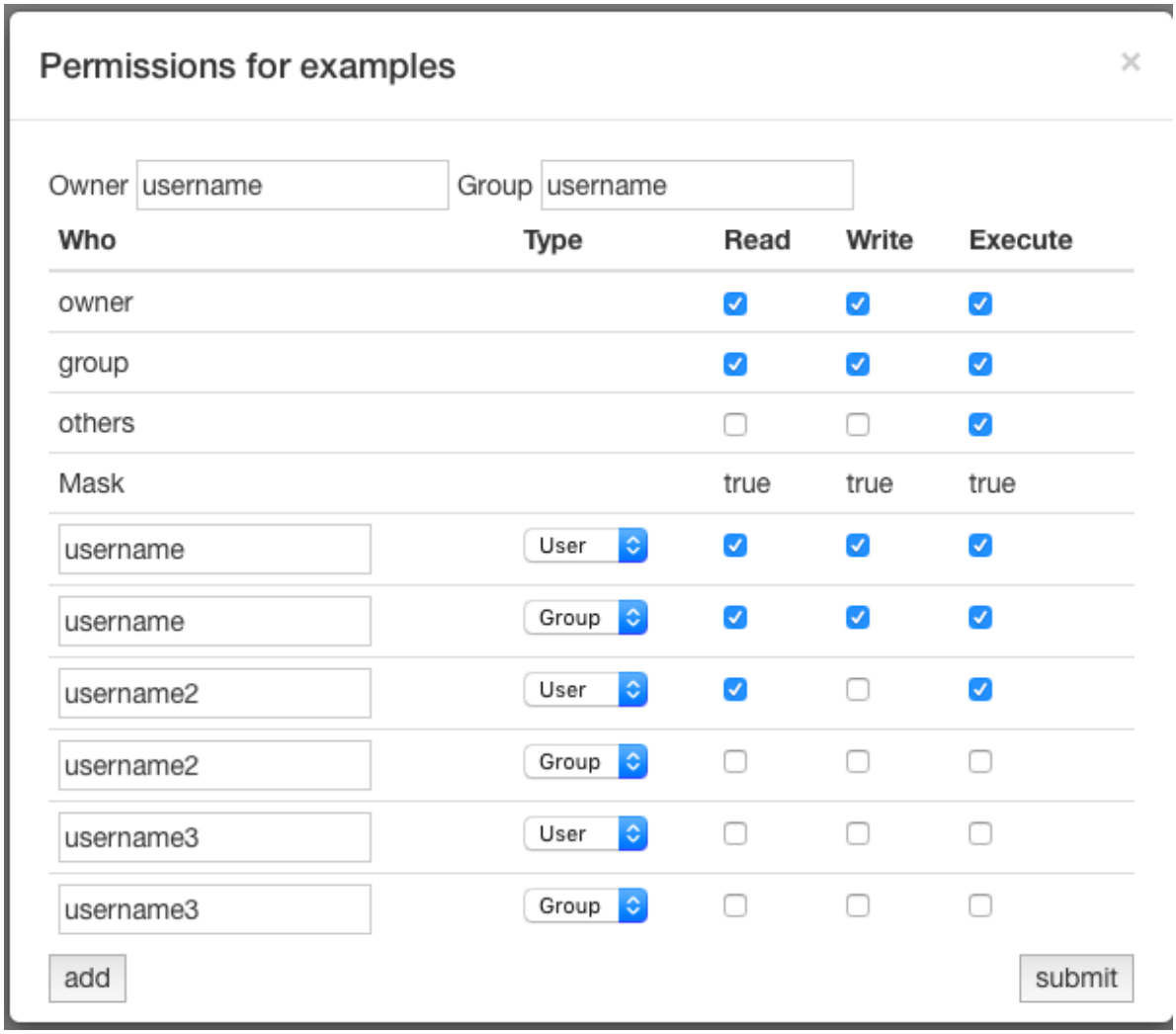
1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.
4. In the menu that displays, select Permissions:



A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

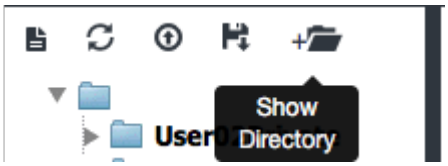
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

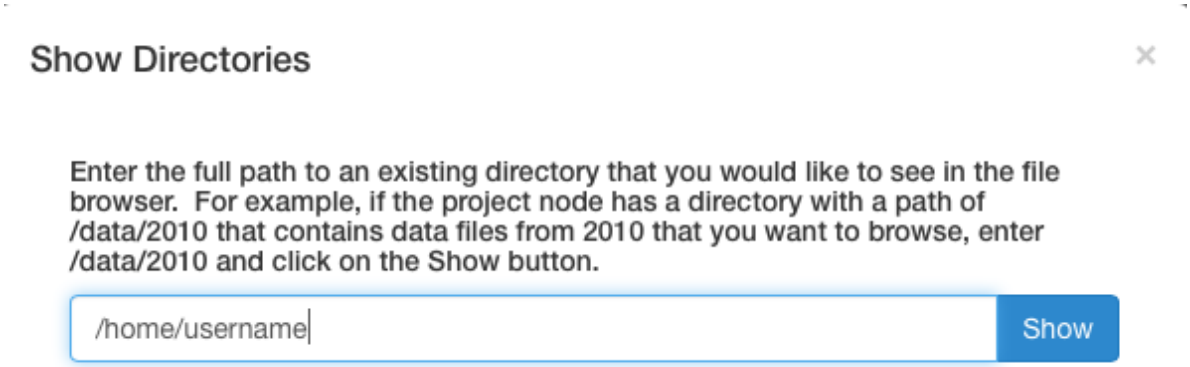
1. Click the Show Directory button at the top of the Workbench File Manager:



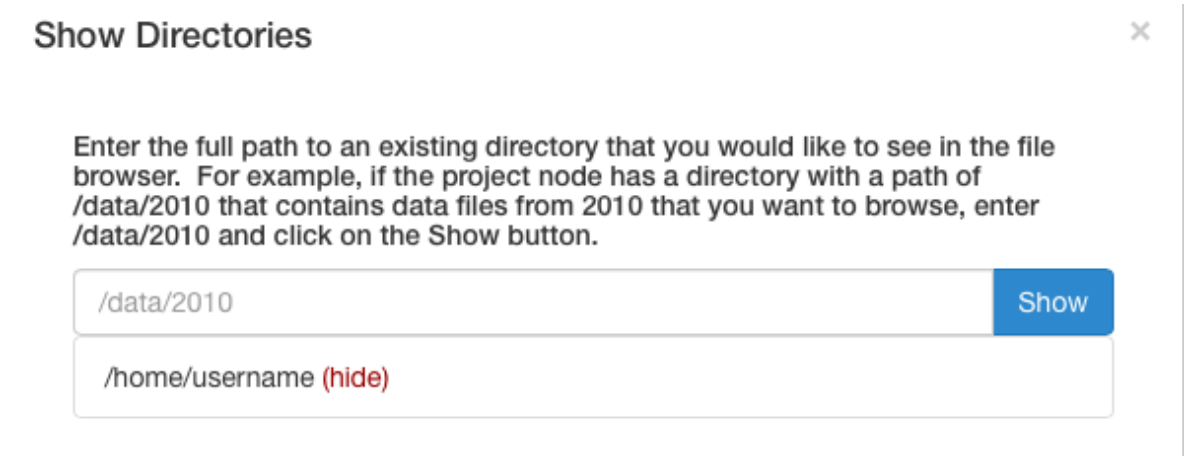
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.



3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



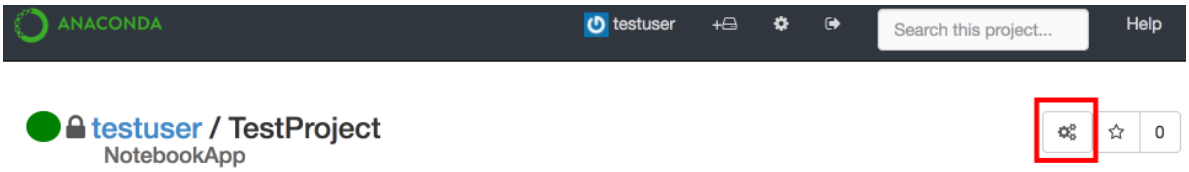
5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

   The shared file is displayed in the File Manager:

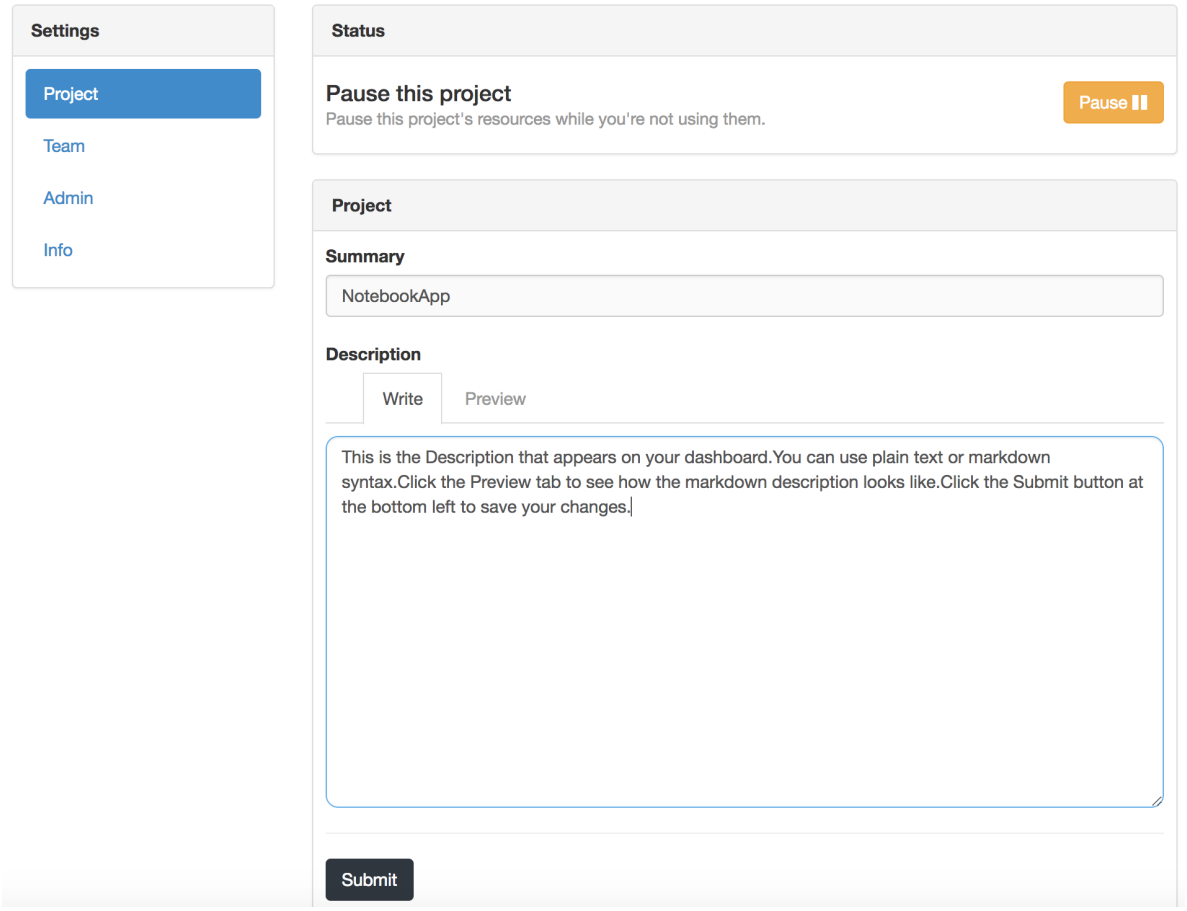
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



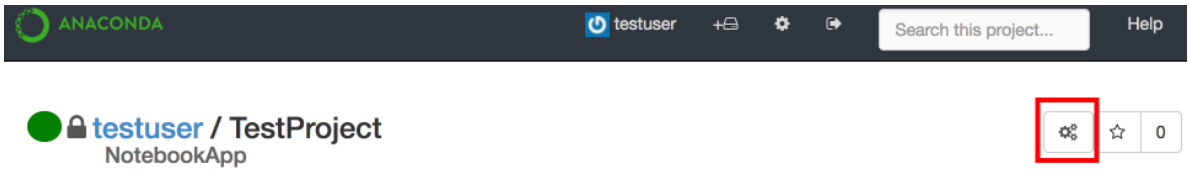
2. In the **Settings** menu, select Project.



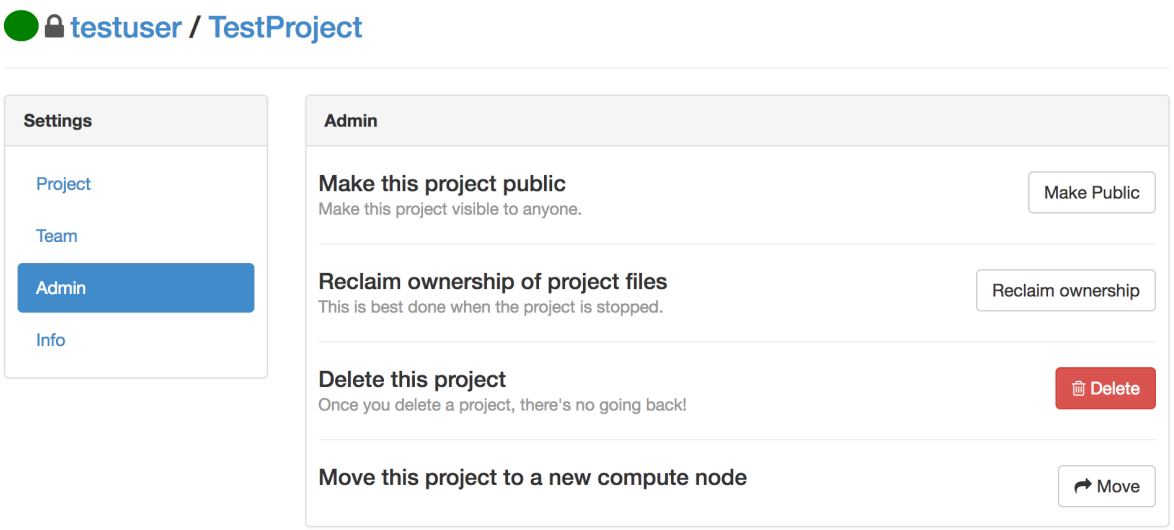
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



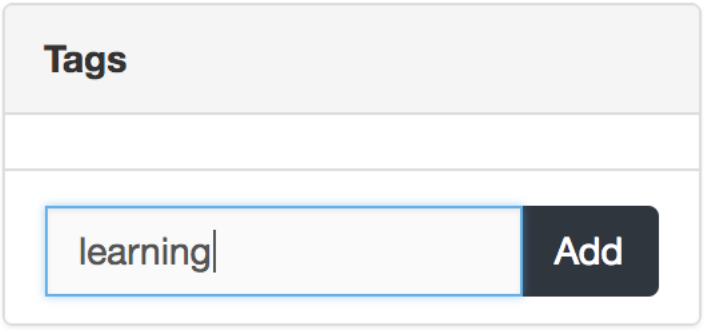
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

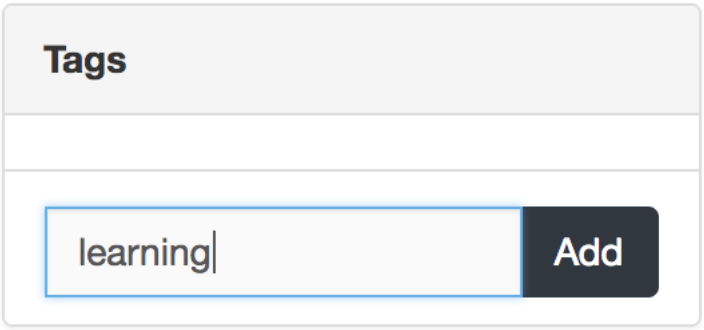
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

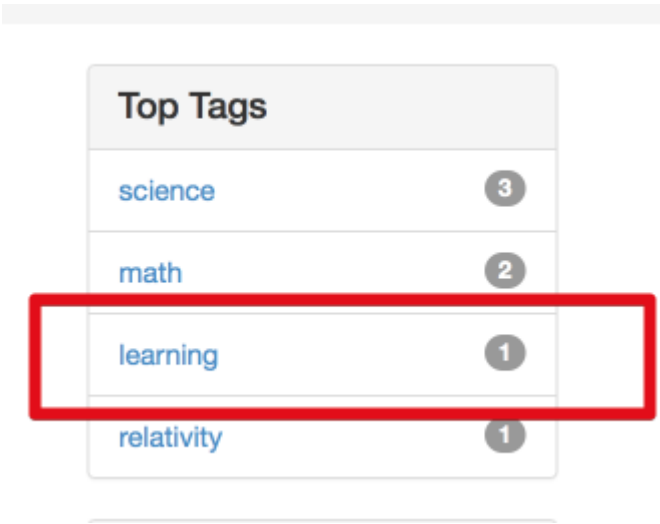


2. Click the Add button.

   The new tag is added to the Tags list:

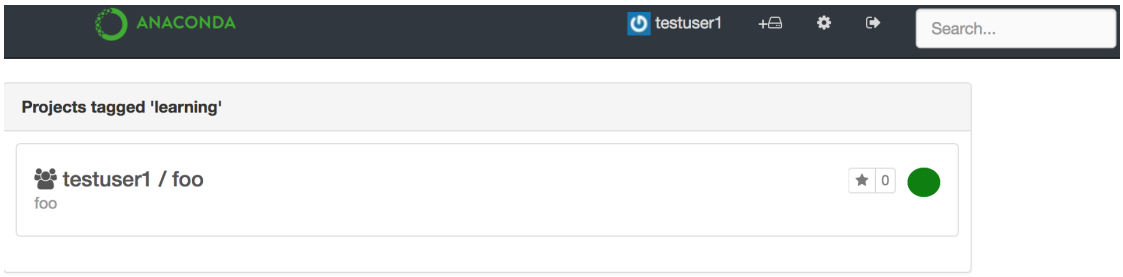


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



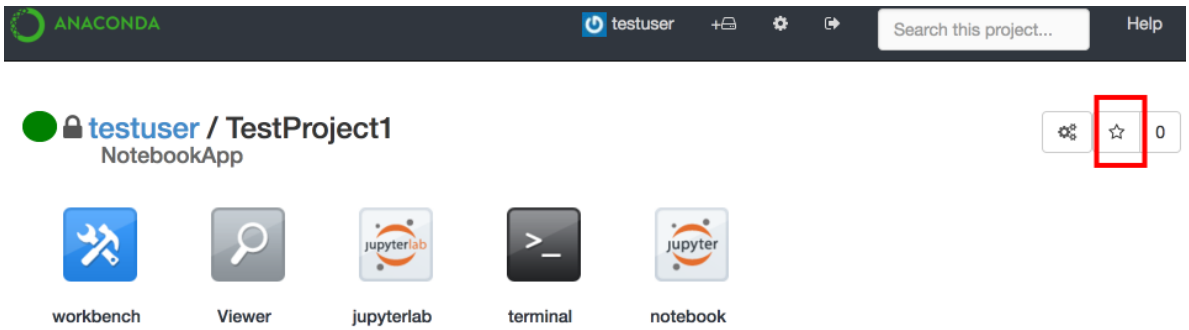
1. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

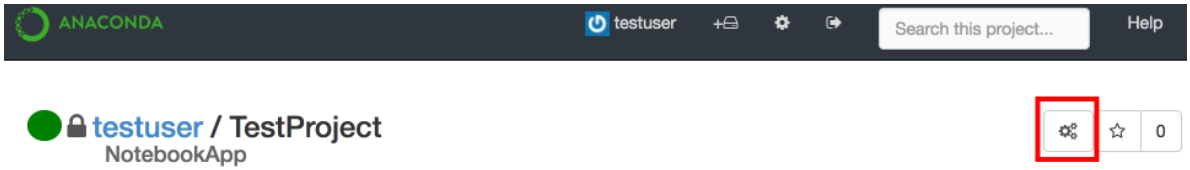


3. To unstar a project, click the Star icon again.

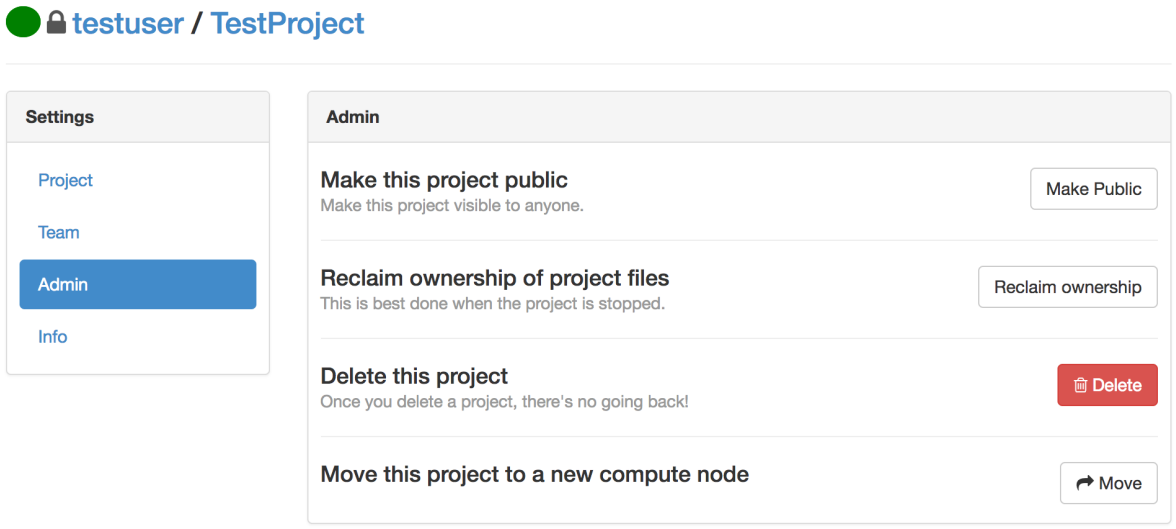
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



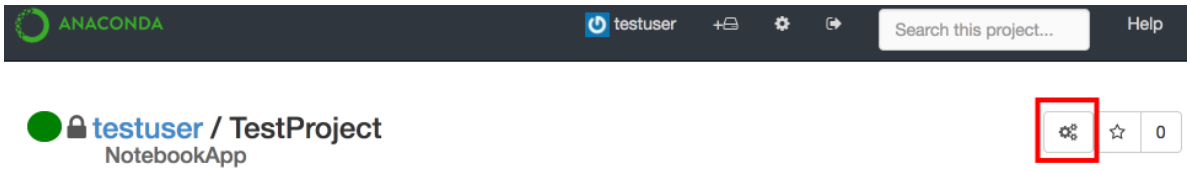
3. In the **Settings** menu, select Admin.



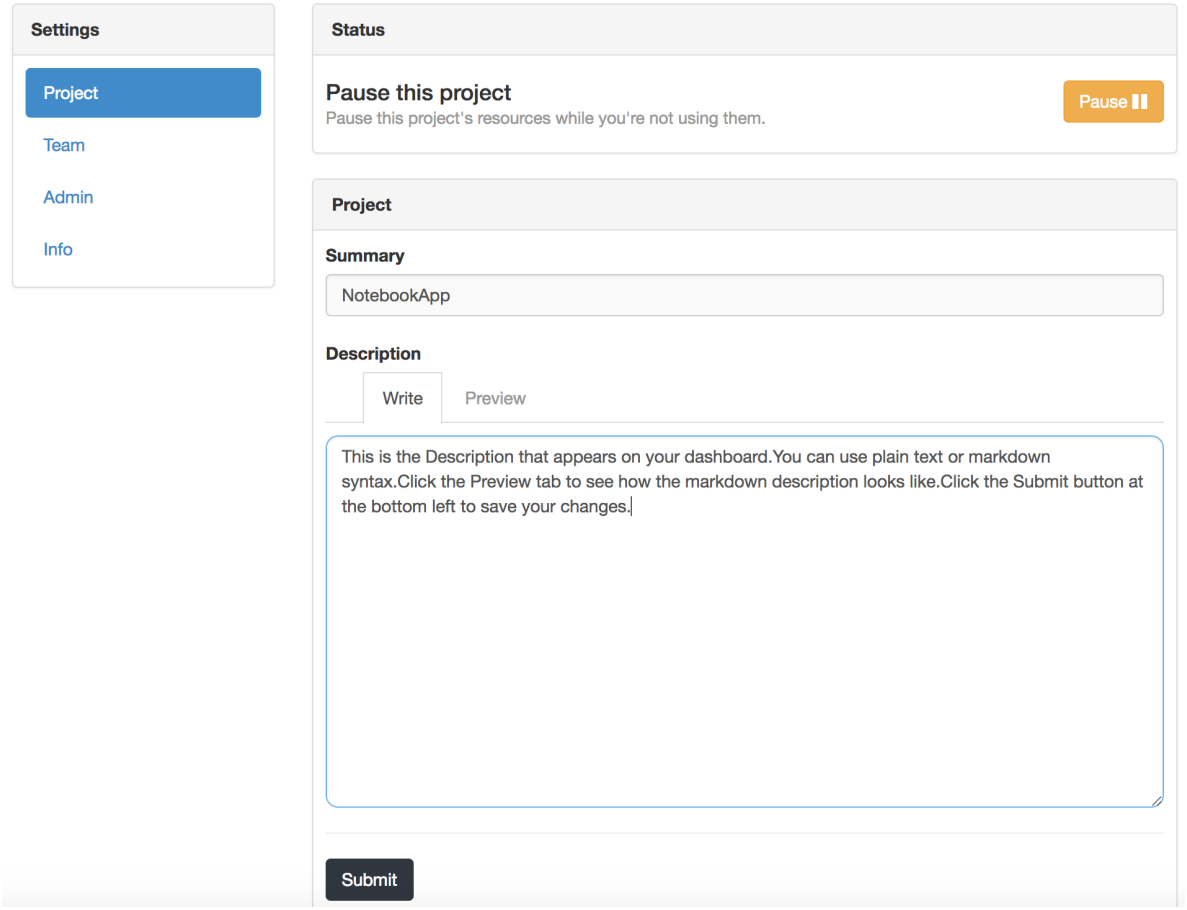
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



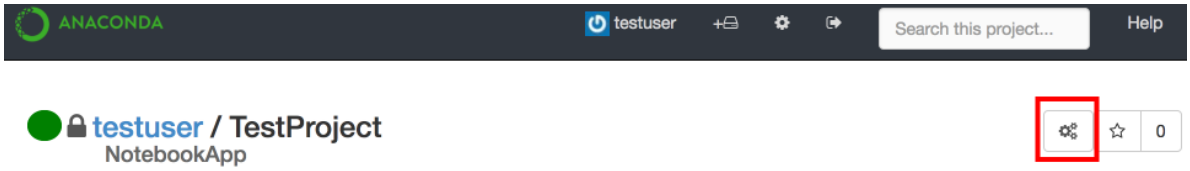
2. In the **Settings** menu, select Project.



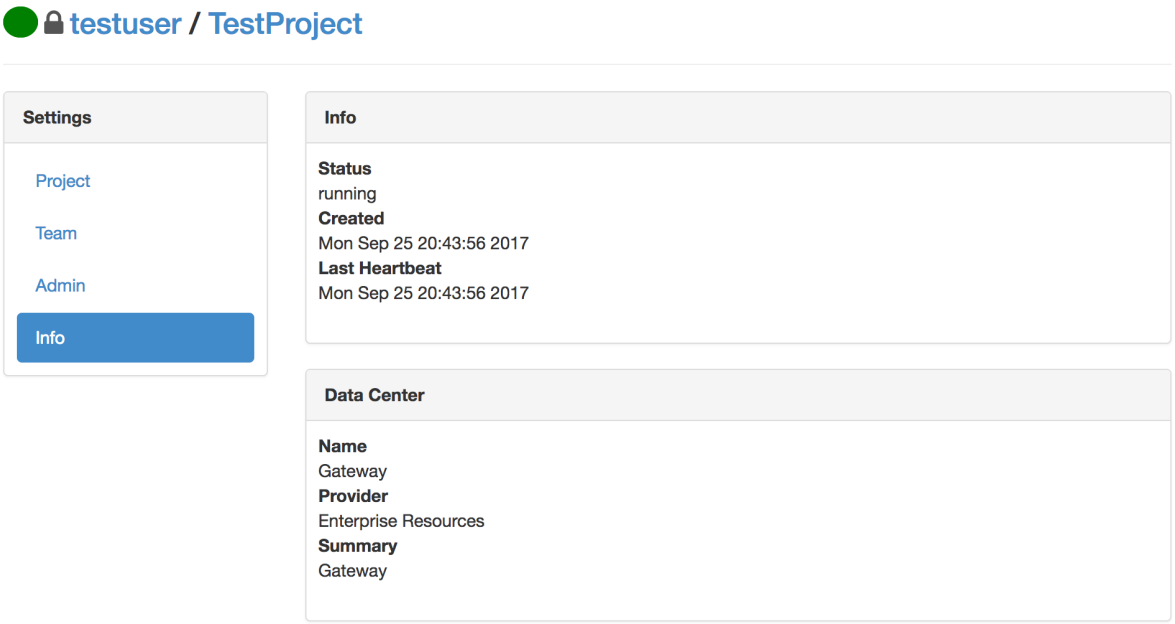
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

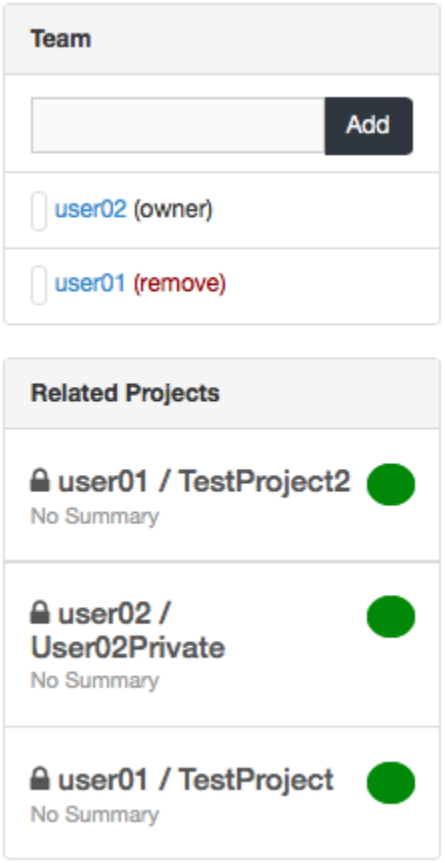


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

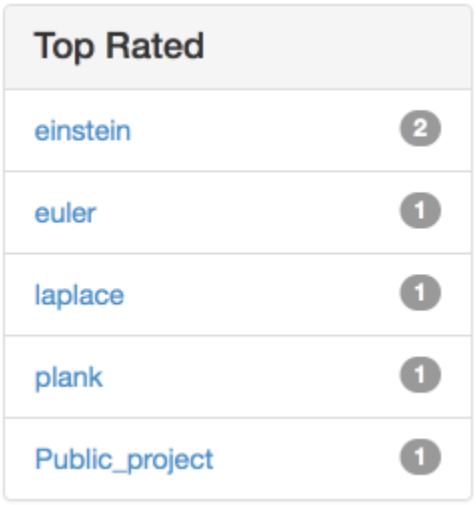
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

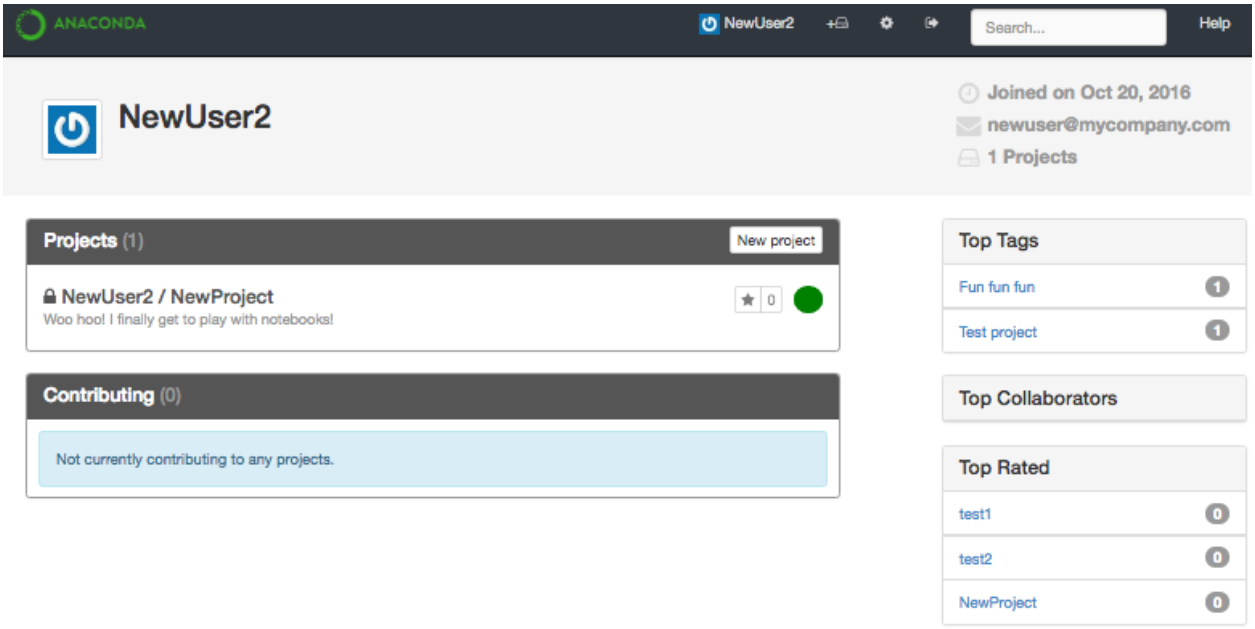


The number next to a project represents the number of stars that have been given to that project.

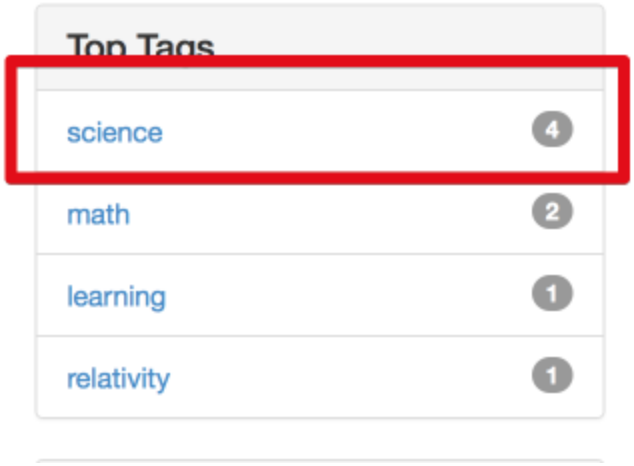
Click a project name to view the project's home page.

Using tags to find a project

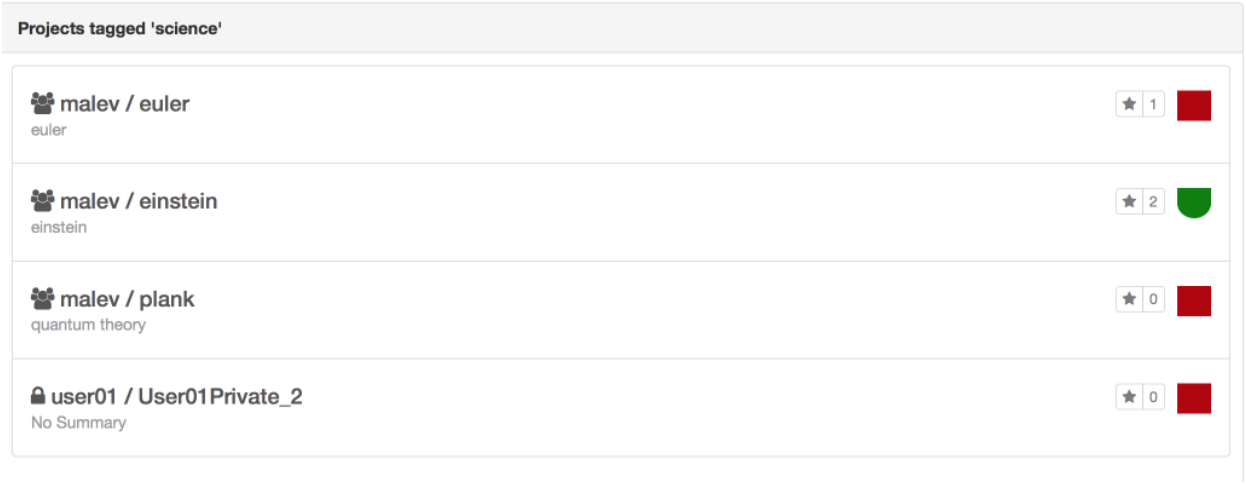
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

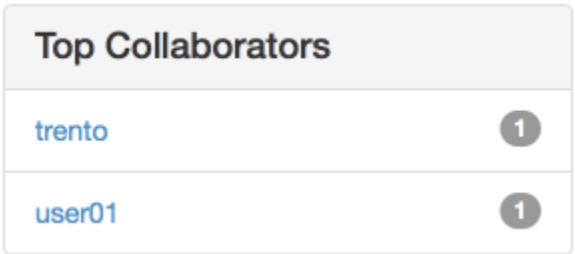


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

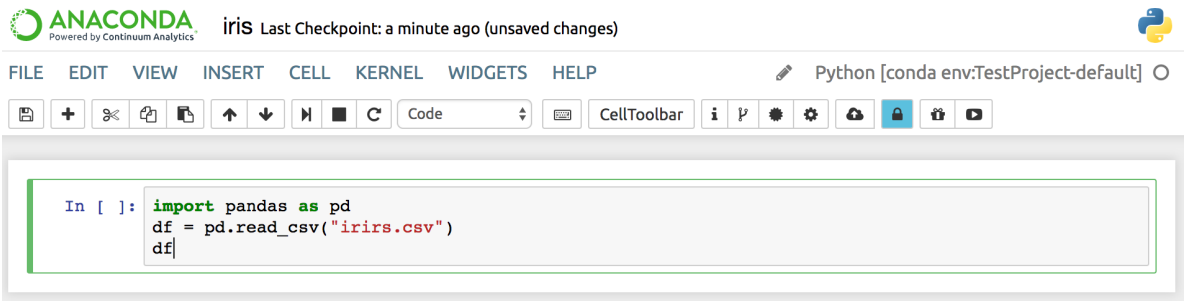
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

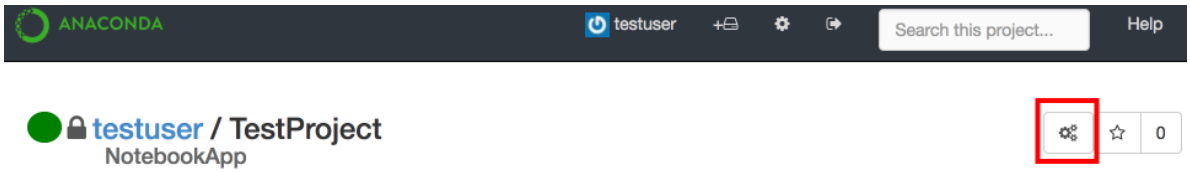
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

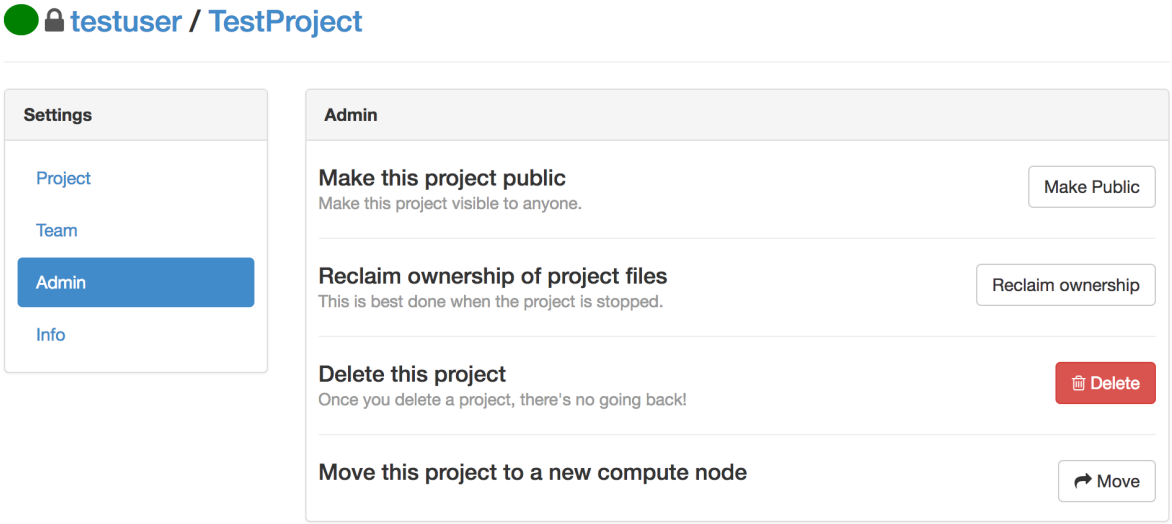
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



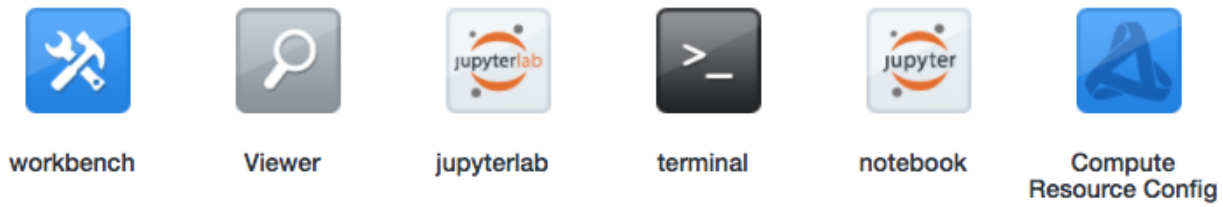
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Using Workbench

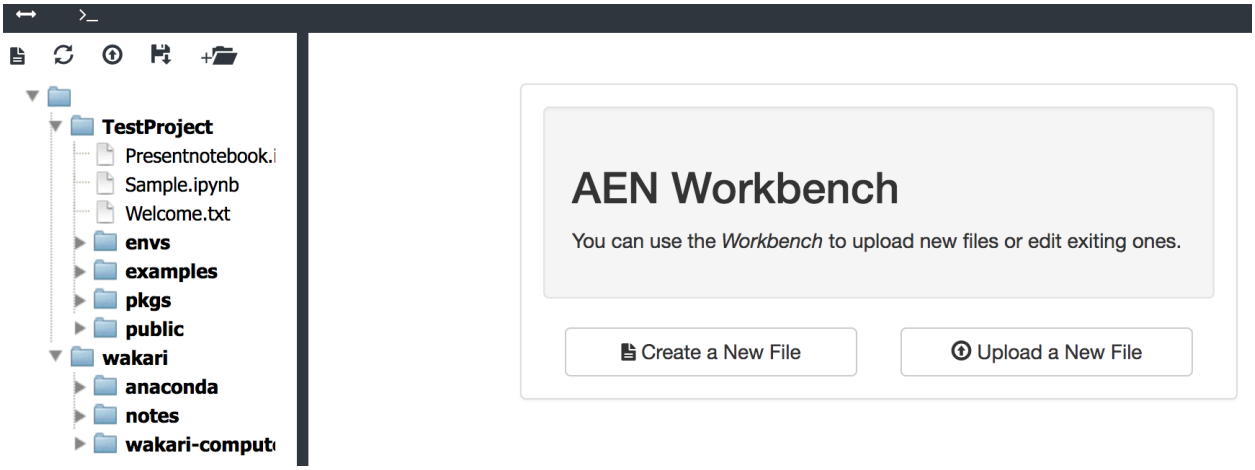
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.
- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

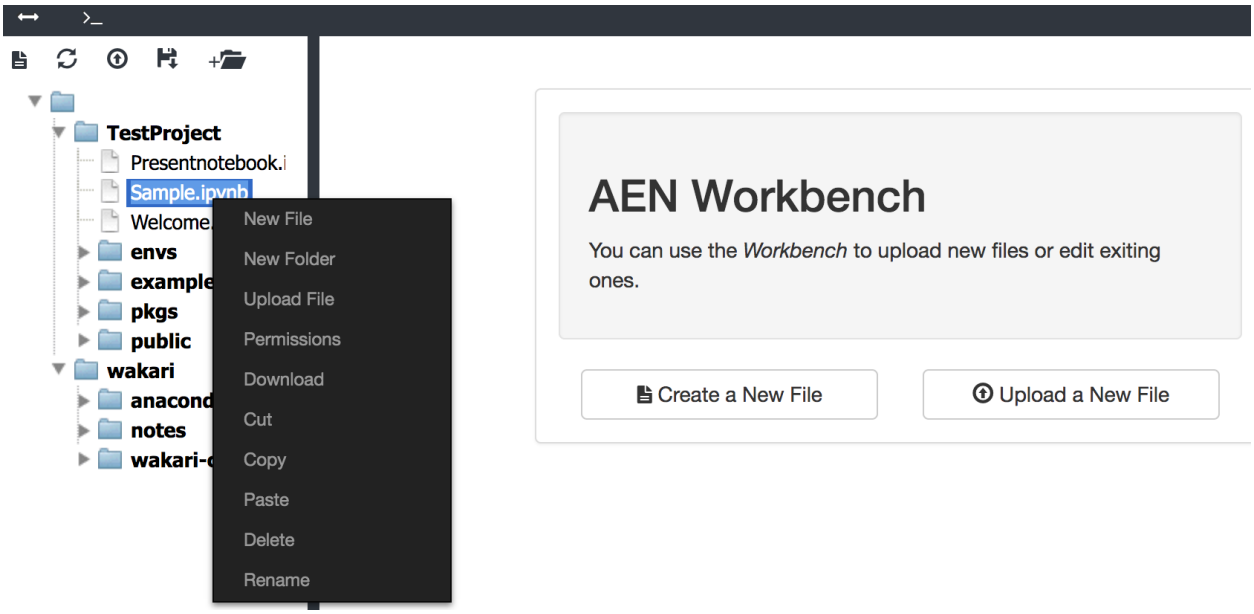
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

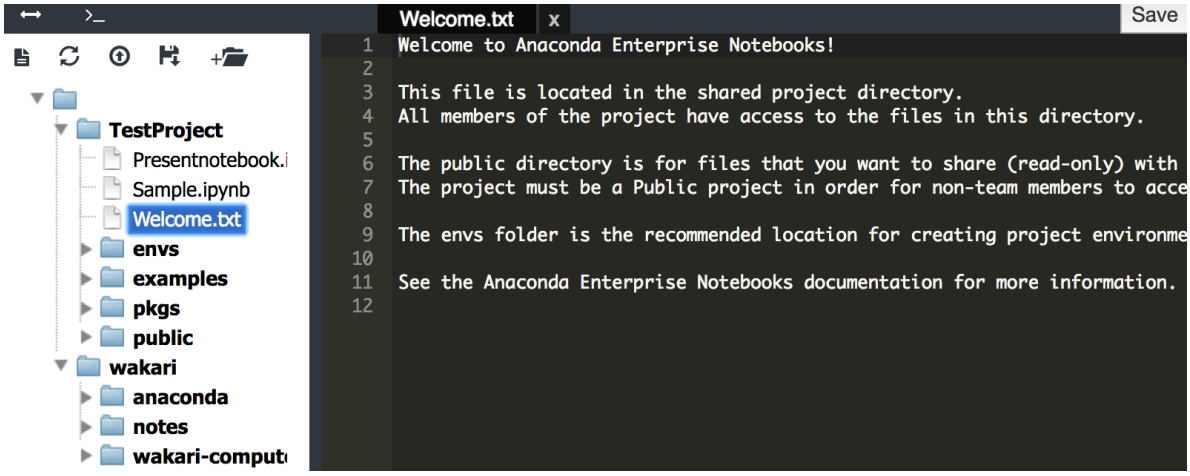
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

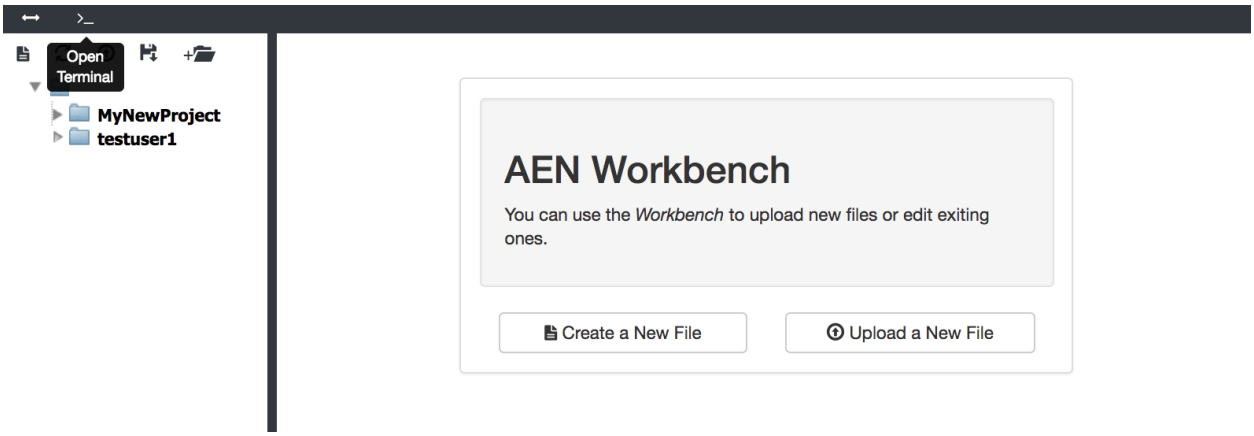


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

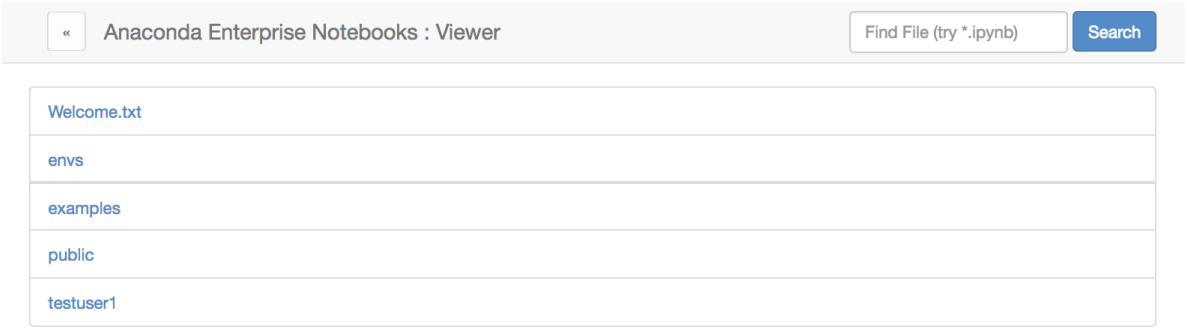
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

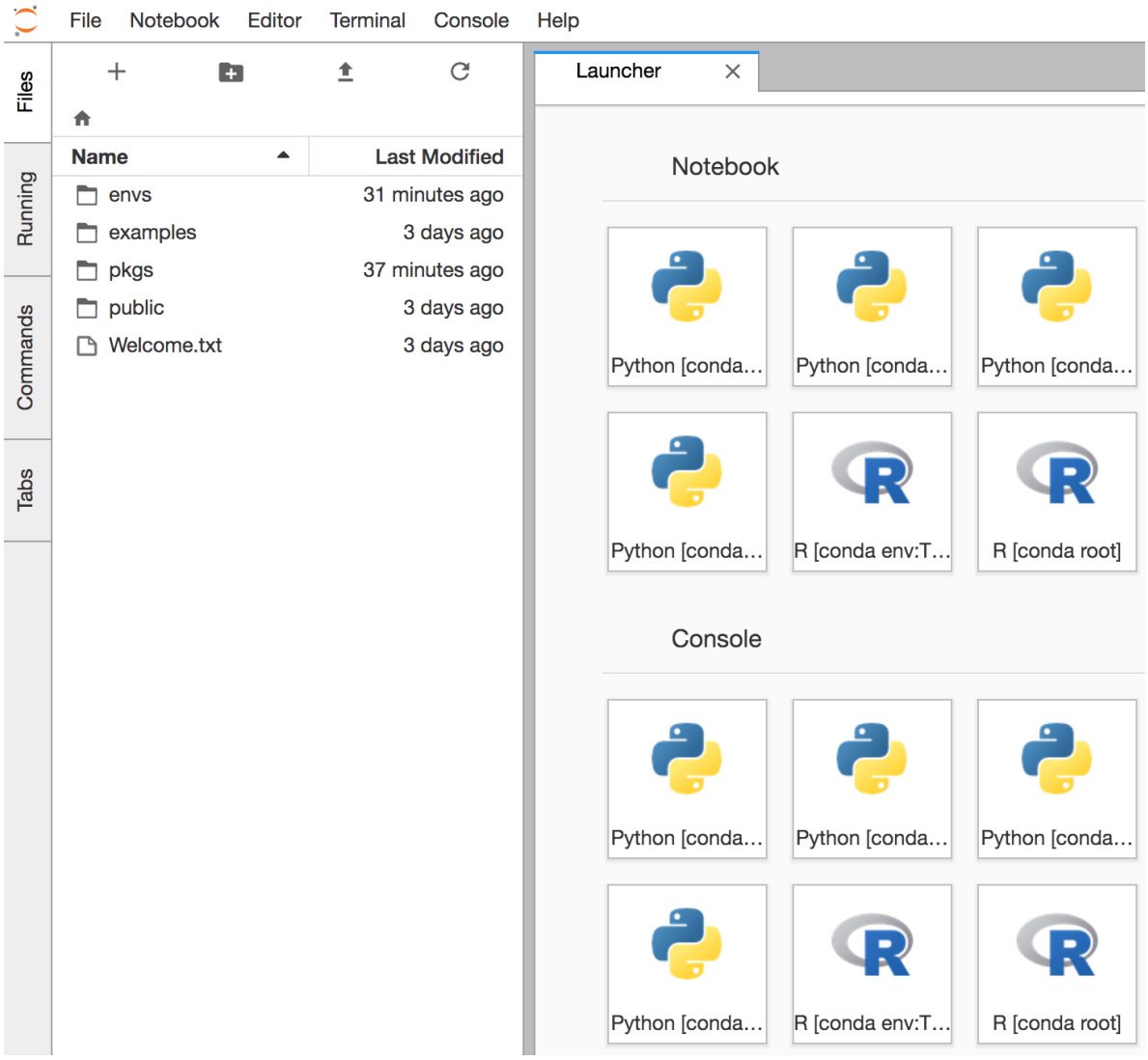
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:



Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:

```
+ 1                                                                    bash
(/projects/aen_admin/TestProject/envs/default) ls
envs  examples  pkgs  Presentnotebook.ipynb  public  Sample.ipynb  Welcome
(/projects/aen_admin/TestProject/envs/default)
```

Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

Terminal opens the project directory in a new browser window.

By default, the project directory is `/projects/username/project-name`.

EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

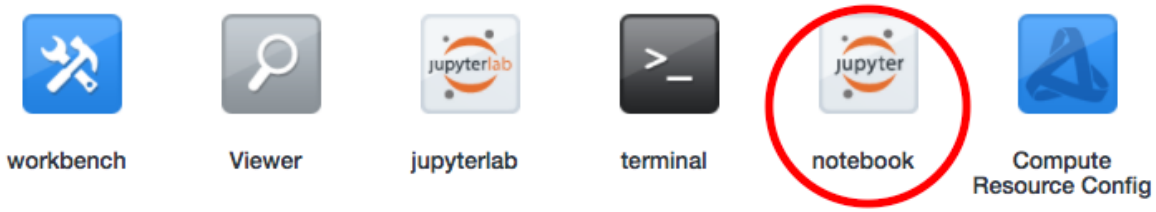
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

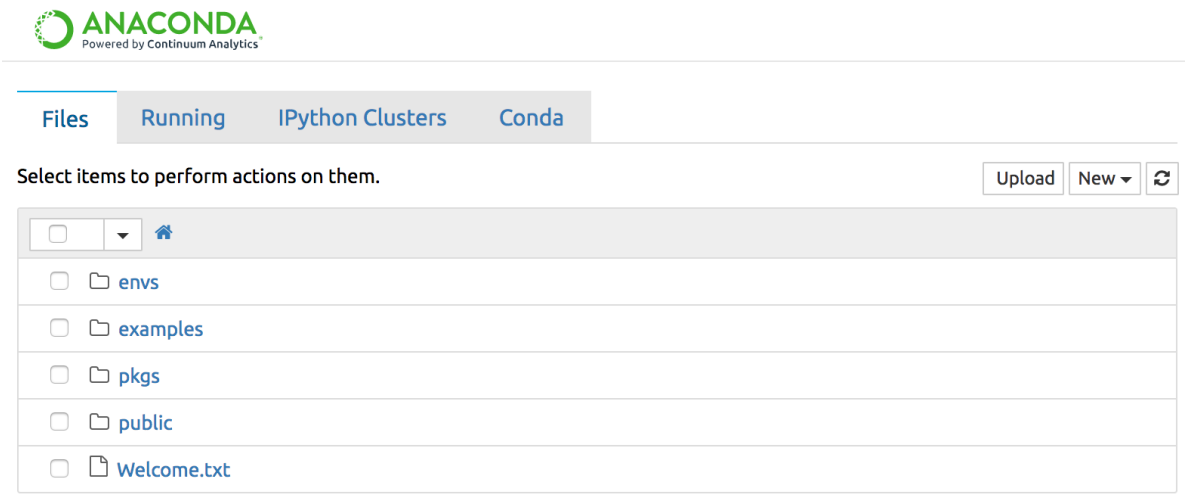
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

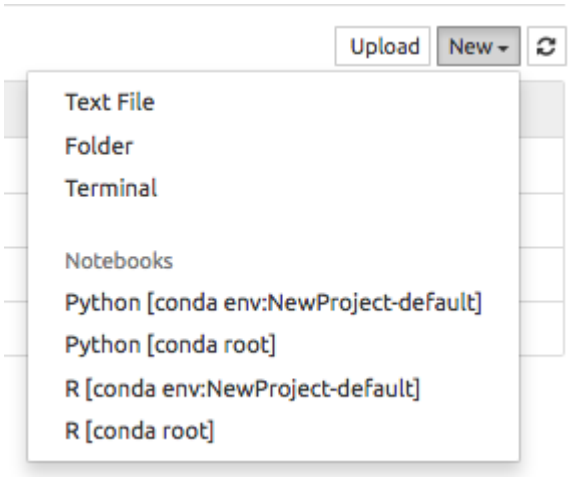
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

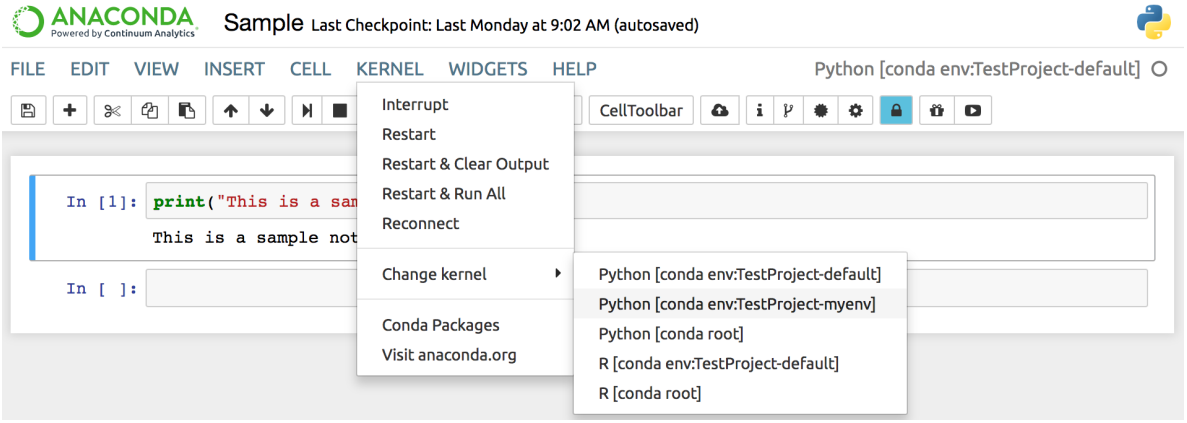
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. To prevent merge conflicts, this model uses a "latest wins" policy as its main merging strategy.

The RCM Jupyter Notebook extension adds four buttons:

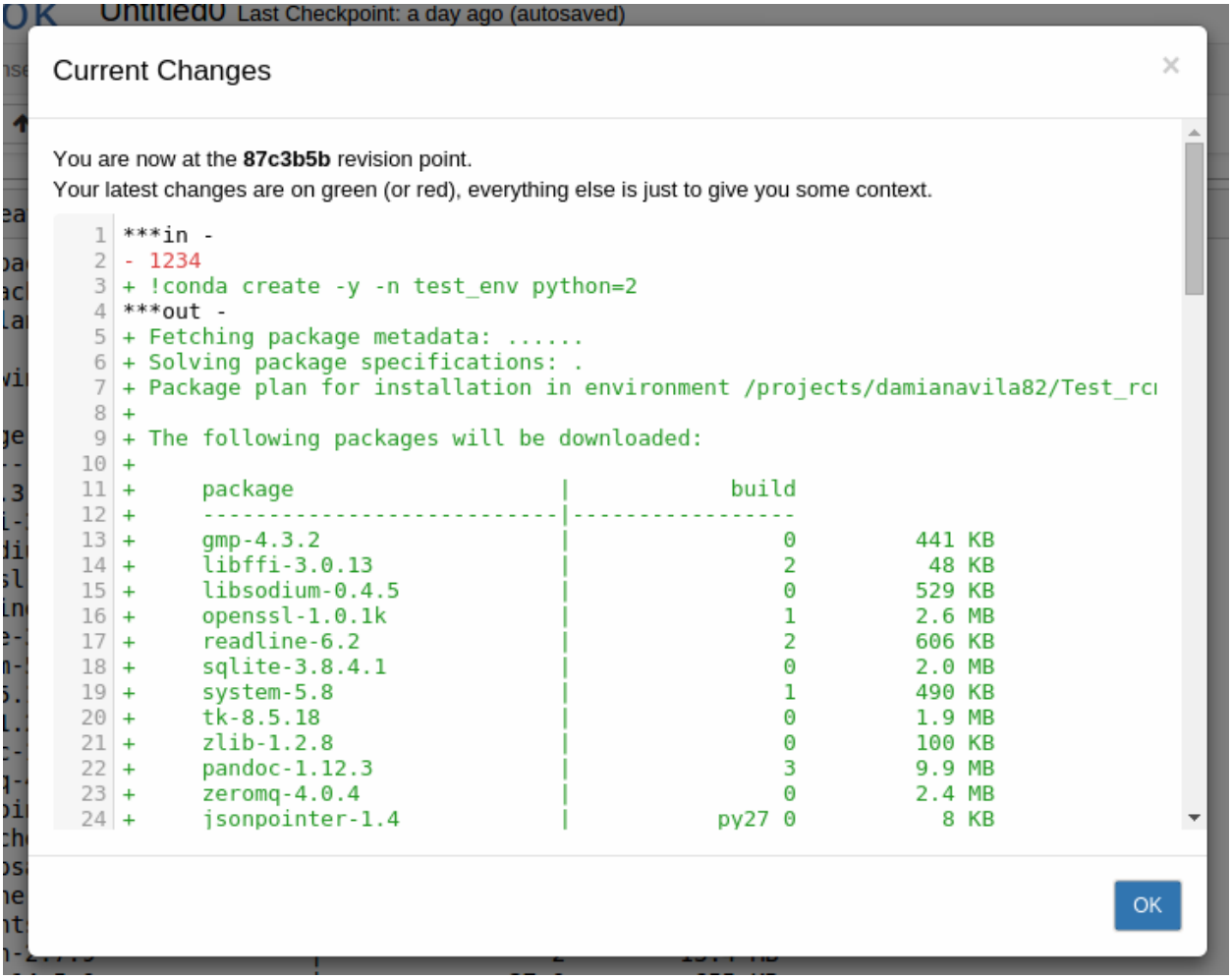
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

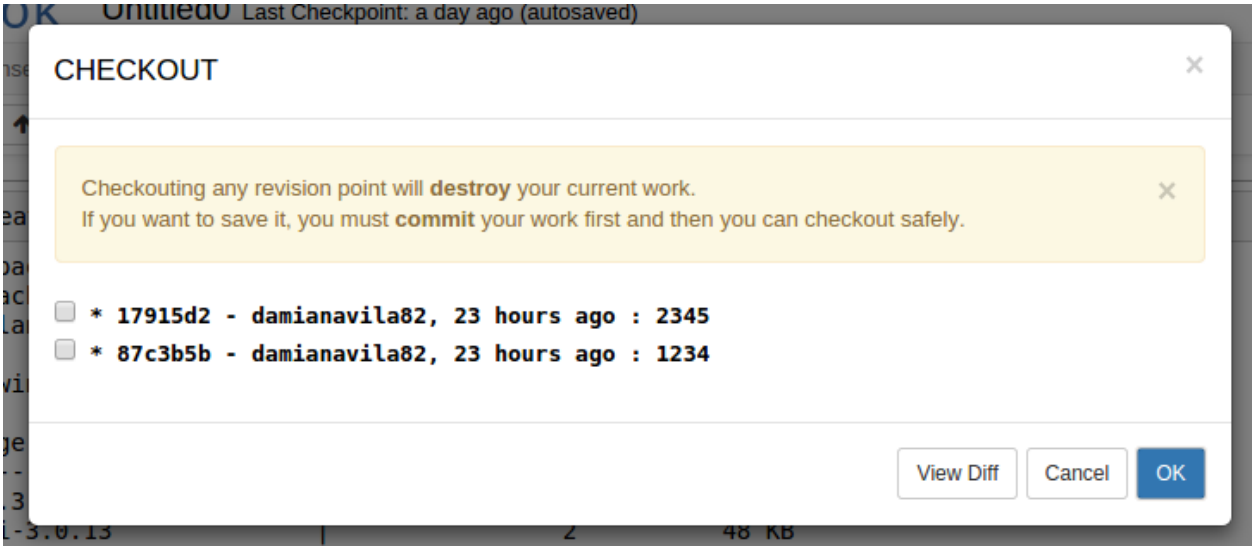
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

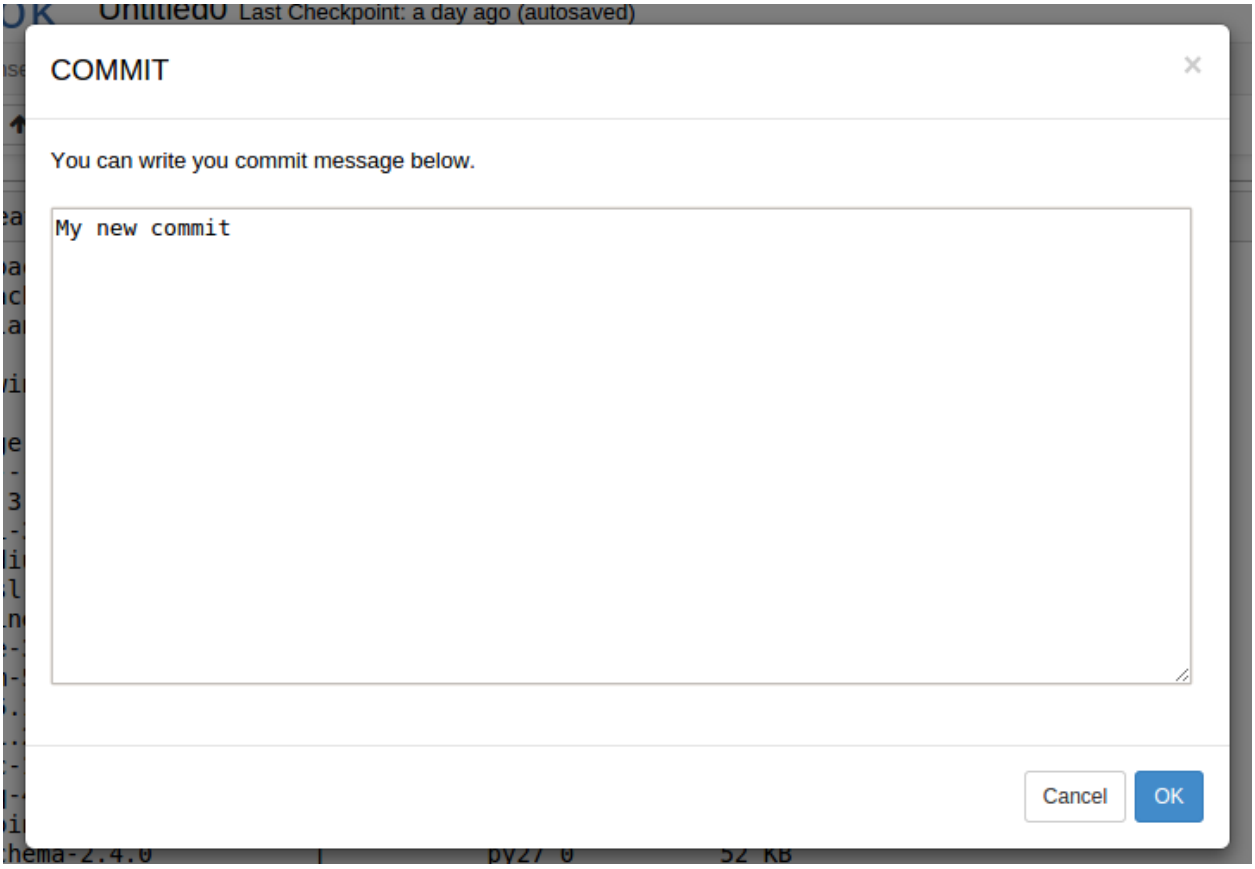
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

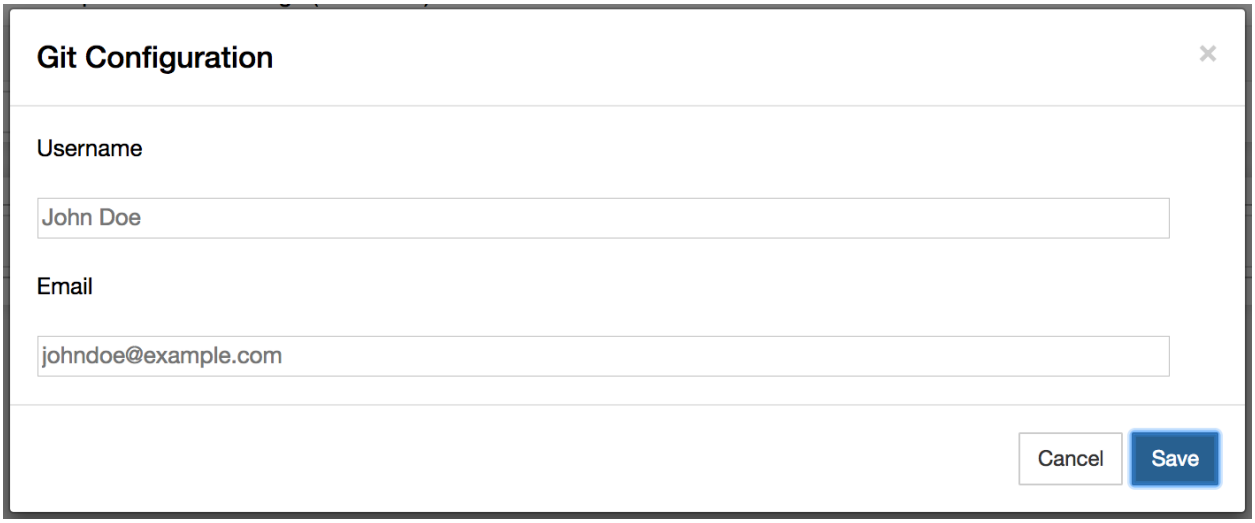
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

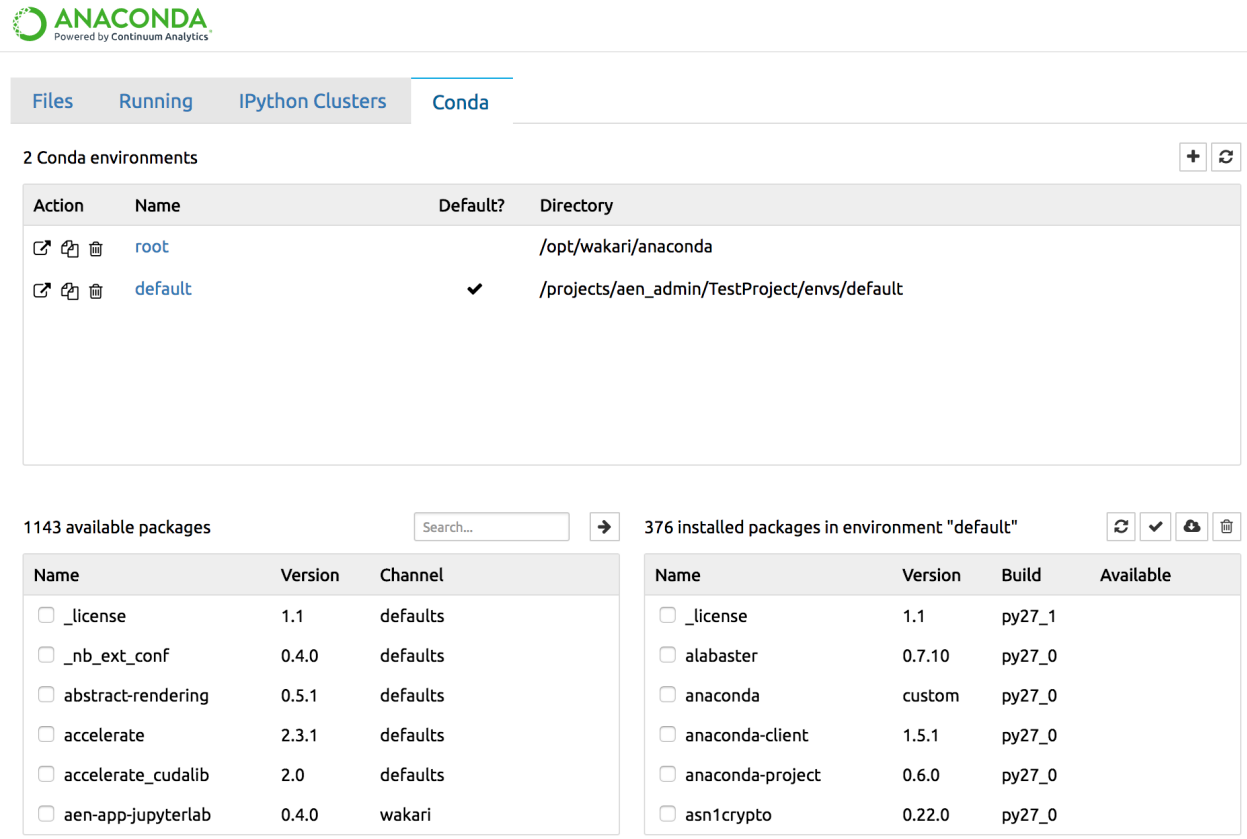
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

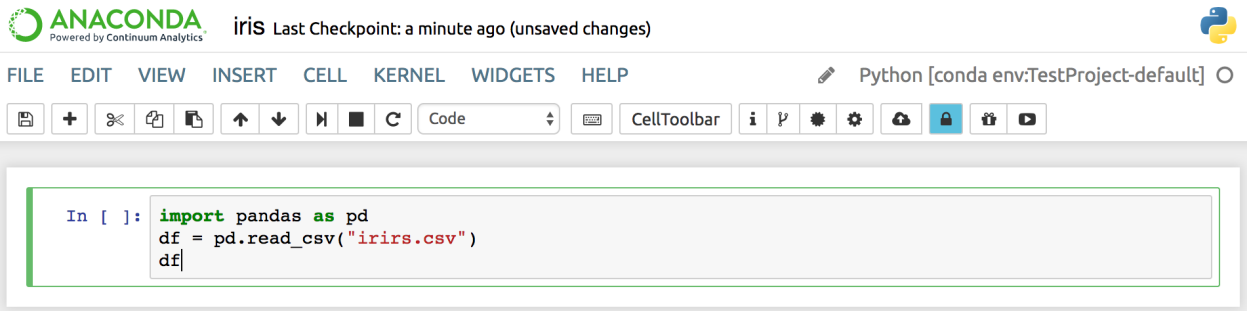
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

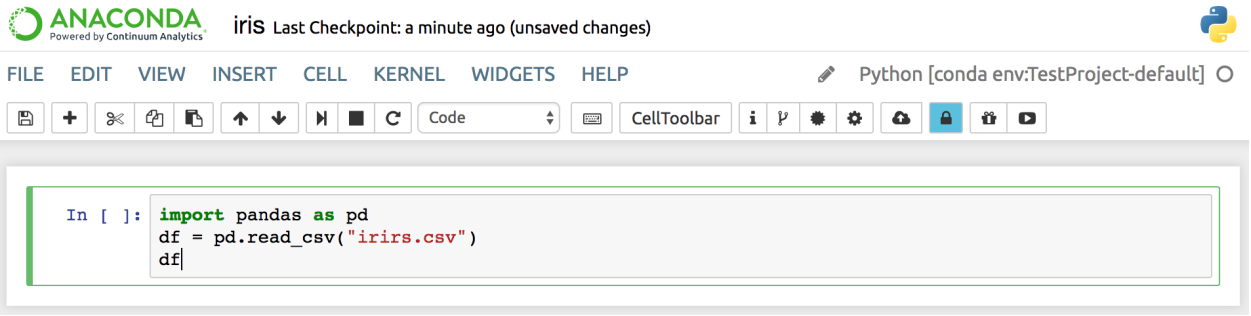
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

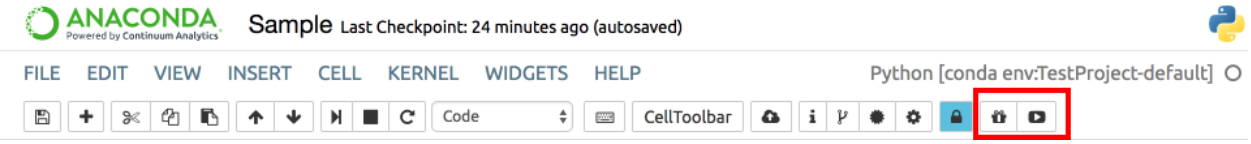
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



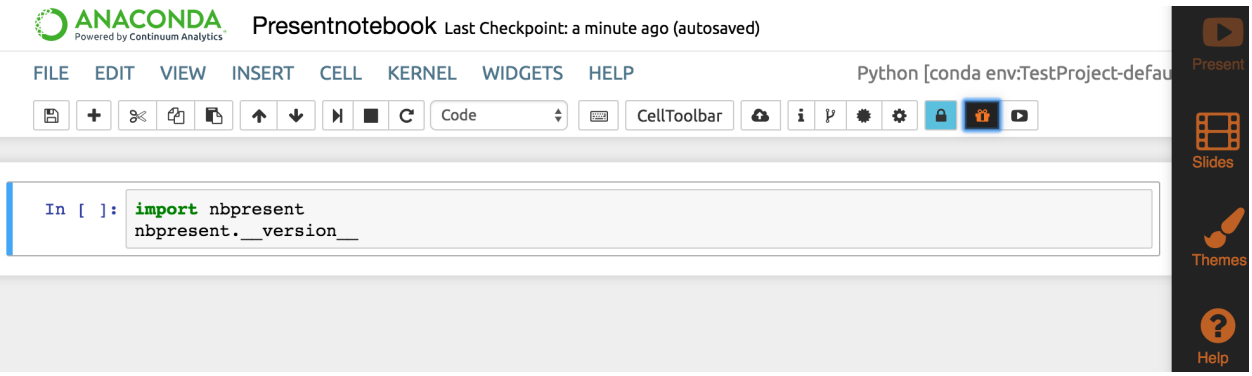
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

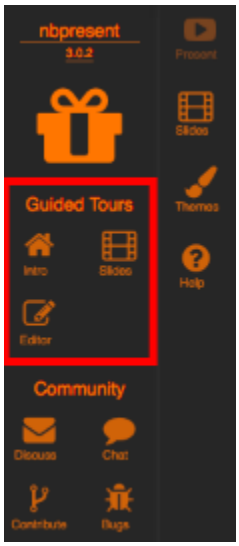


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

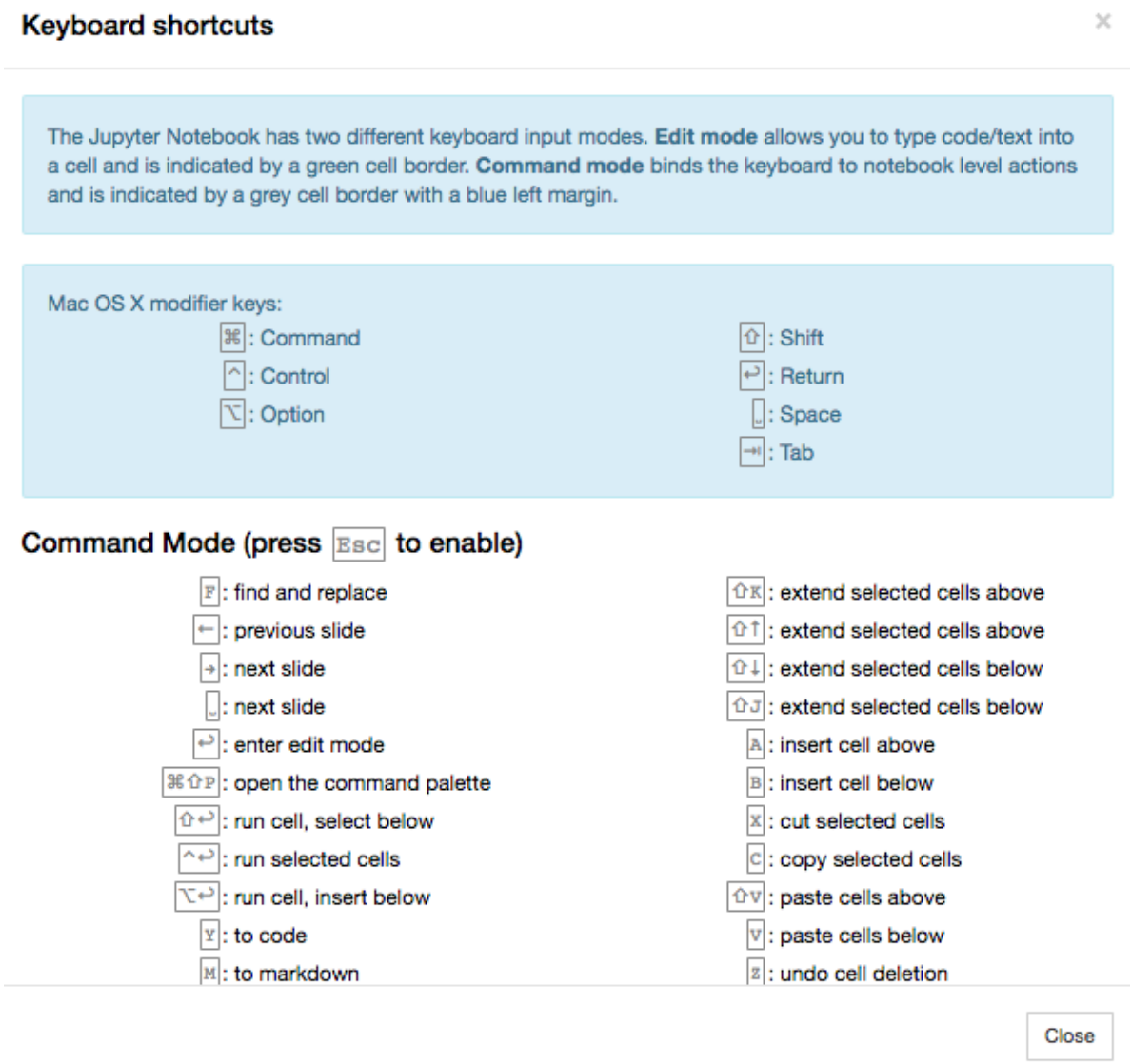
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

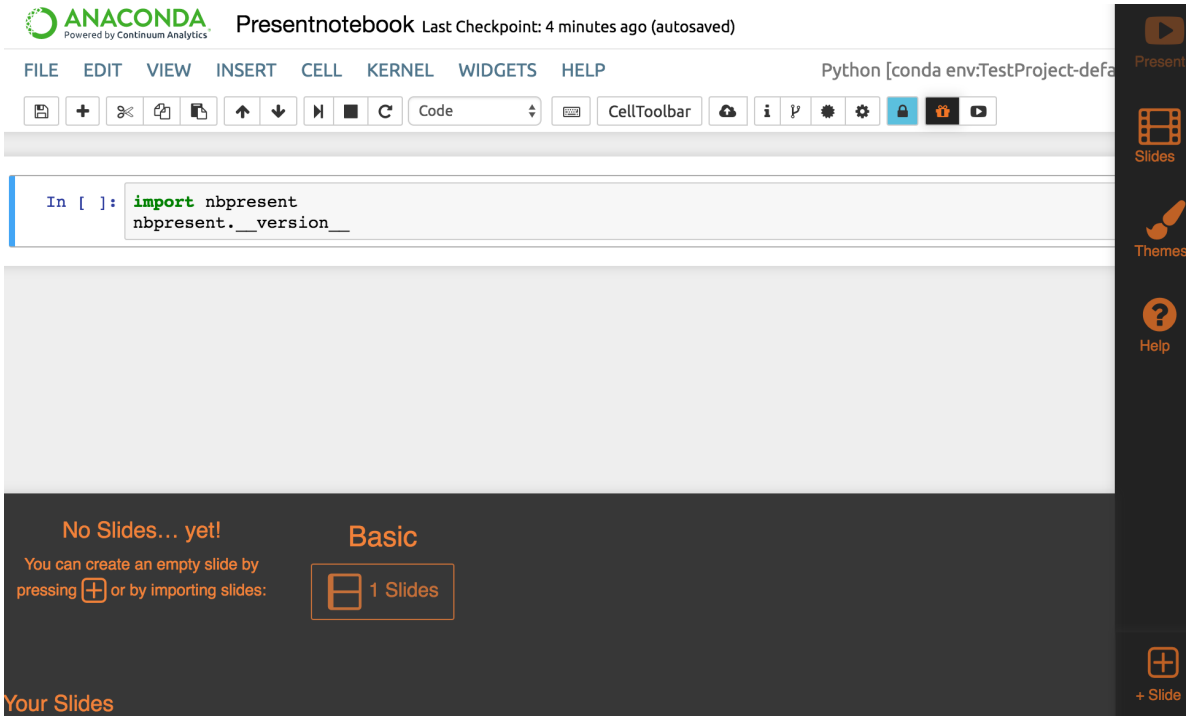
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

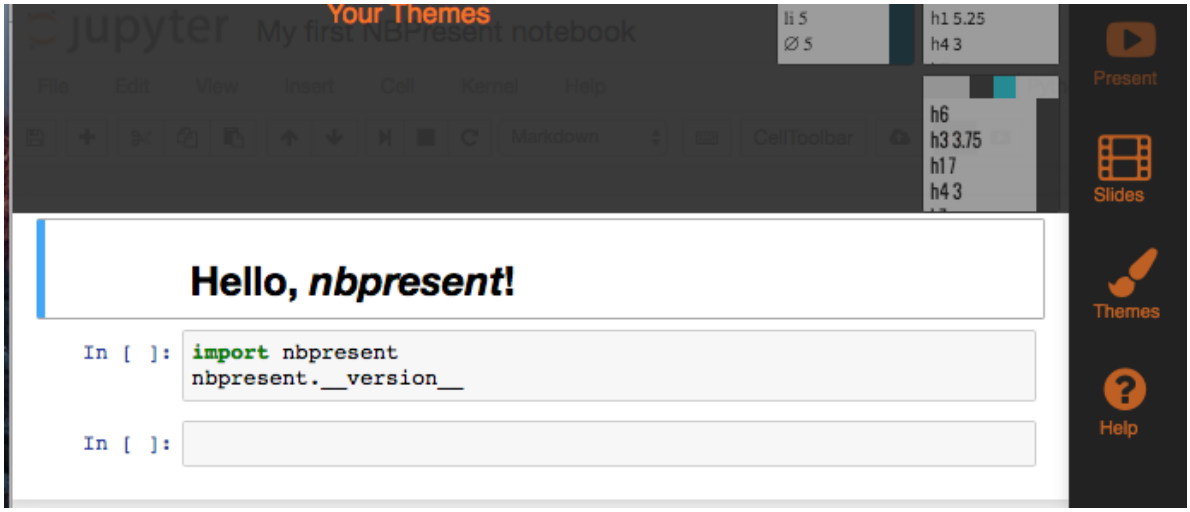
- App Bar—When authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start presenting, where you can use most Notebook functions with the theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



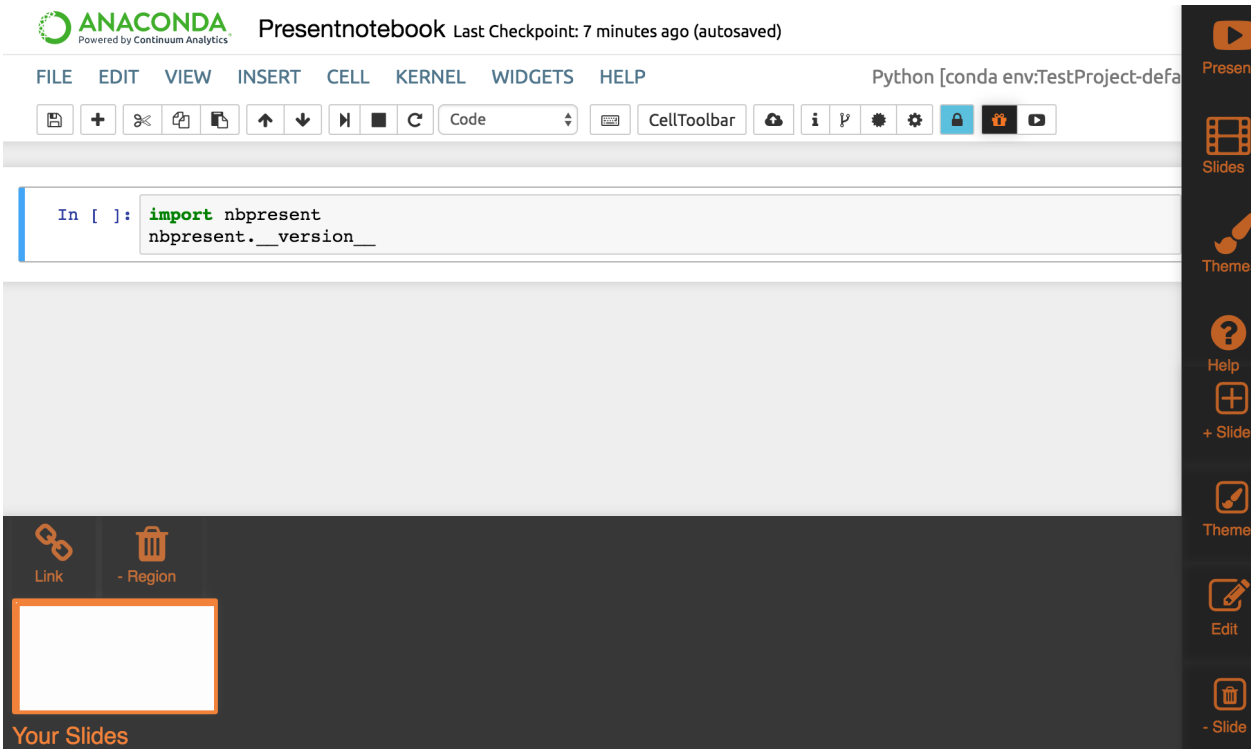
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook `.ipynb` file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate help at any time to try other tours, connect with the present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    - Cell Part: Source (blue)–Source, such as code and Markdown text.
    - Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    - Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    - Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single Region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a Region and a Cell Part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

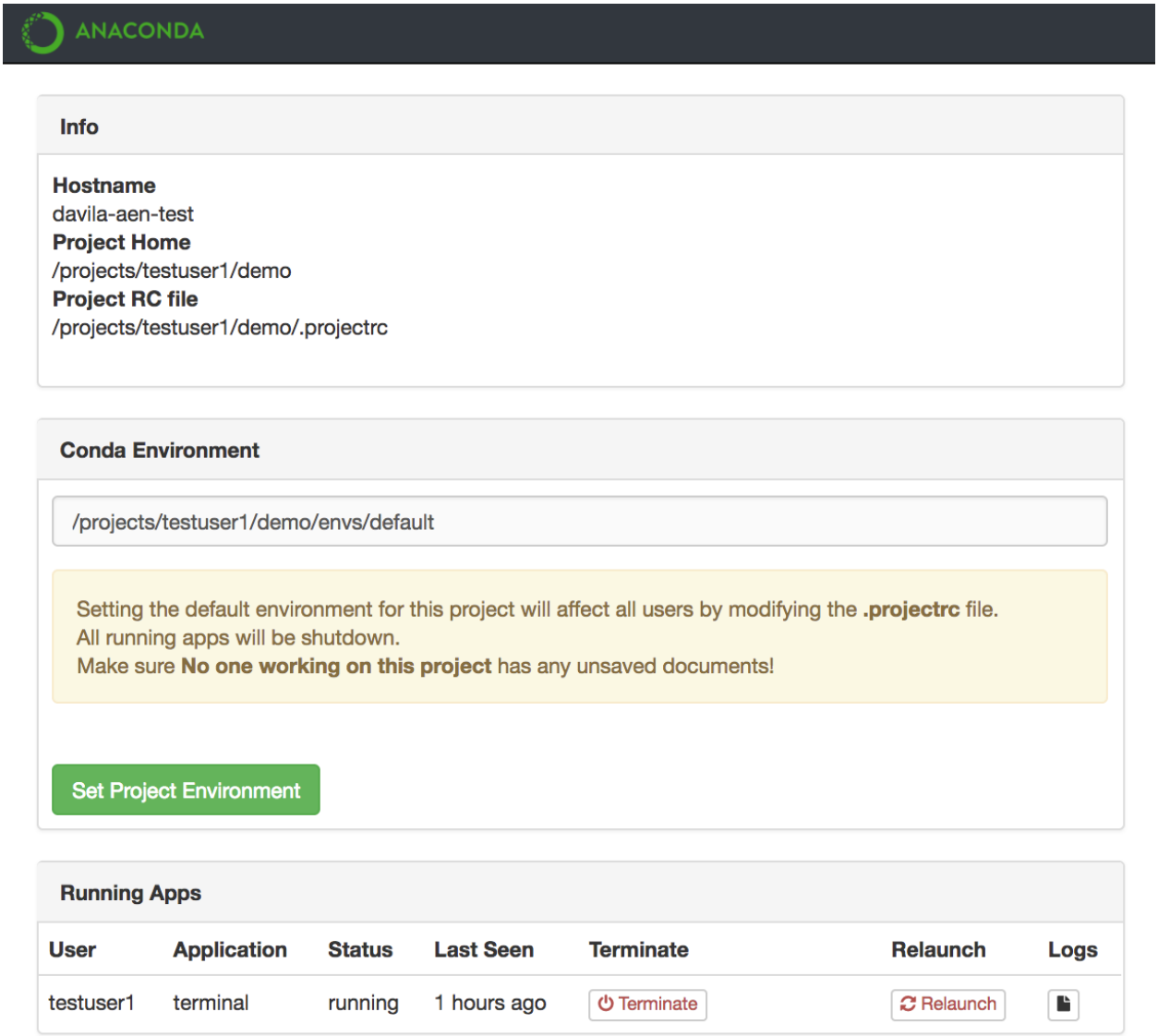
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

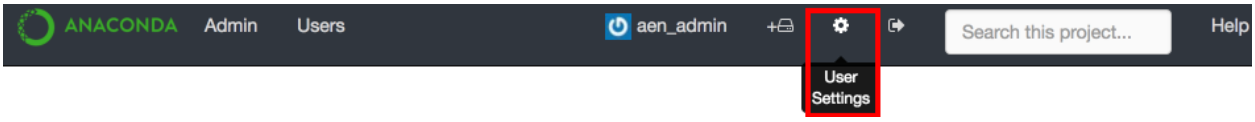
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

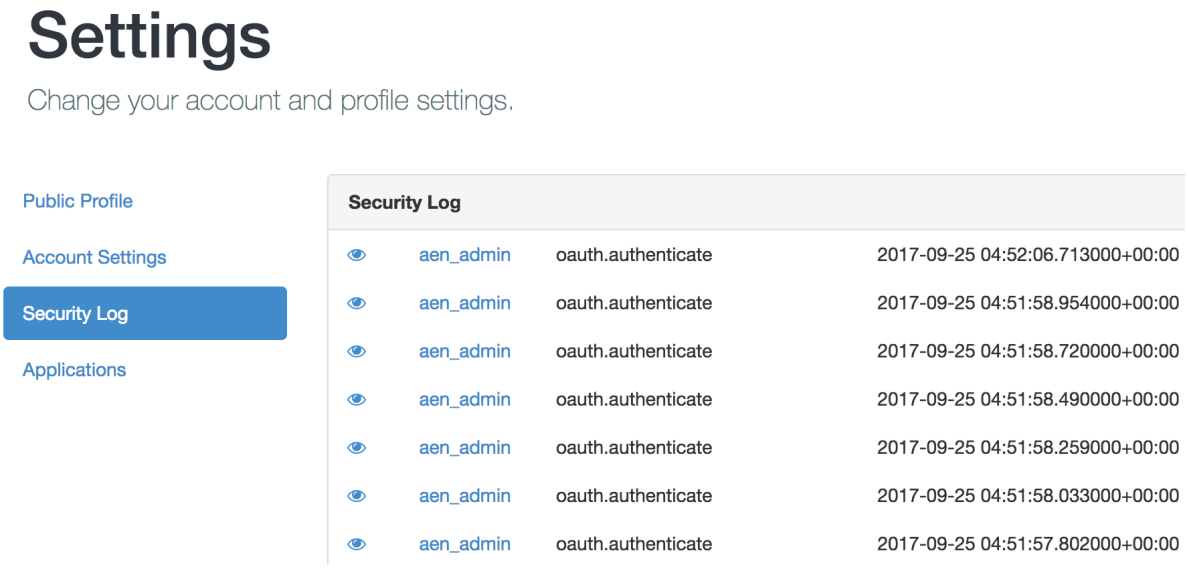
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

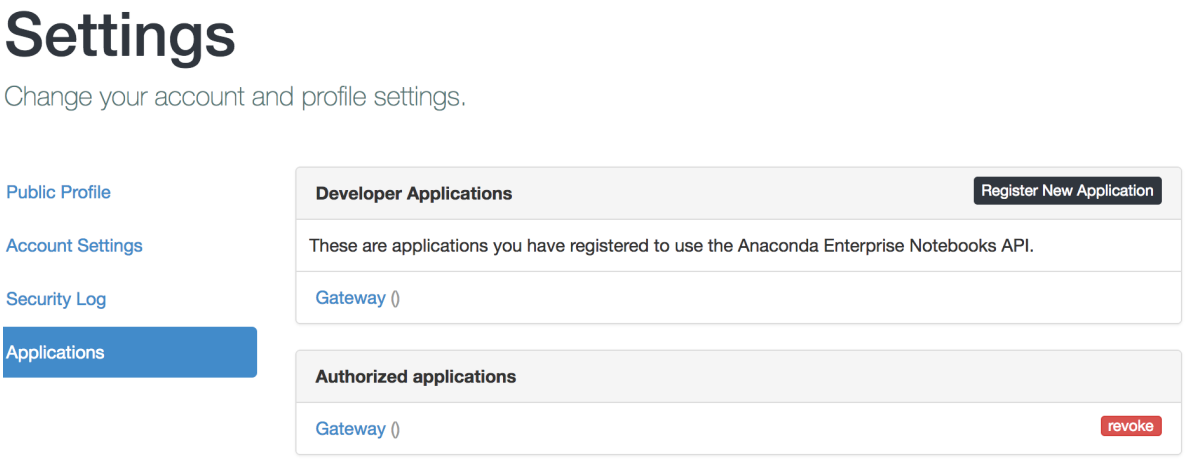


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

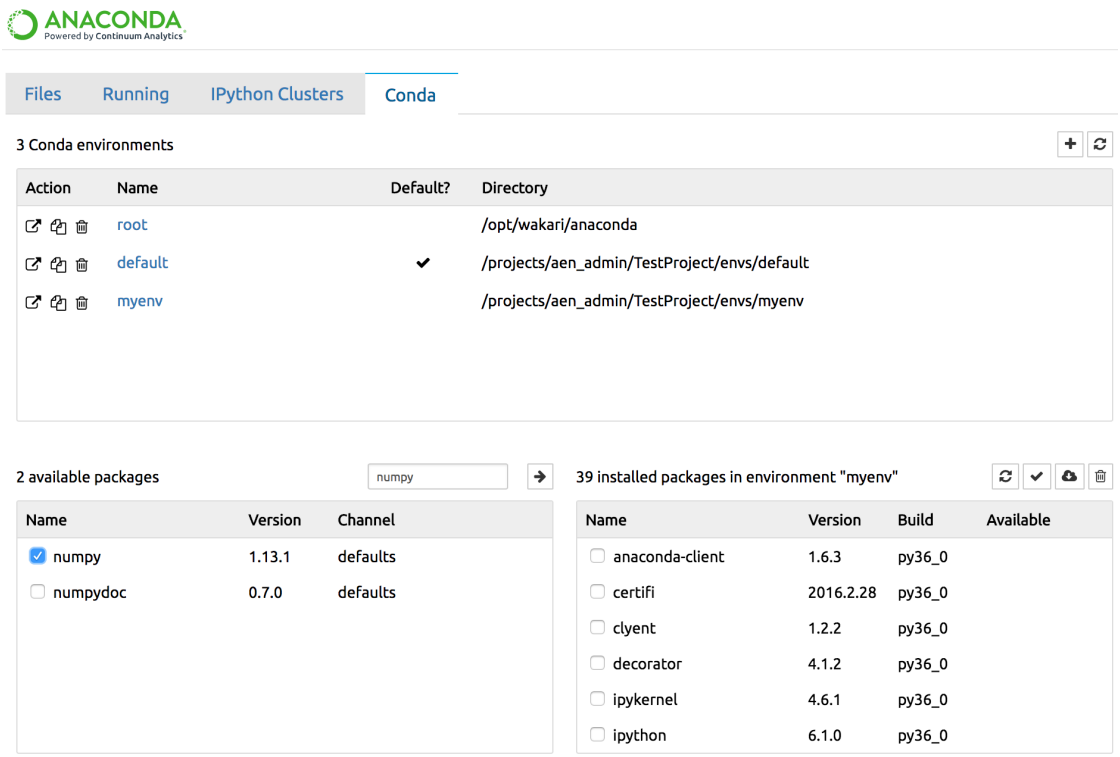
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

   ```
   conda create -n WeatherModel numpy
   ```

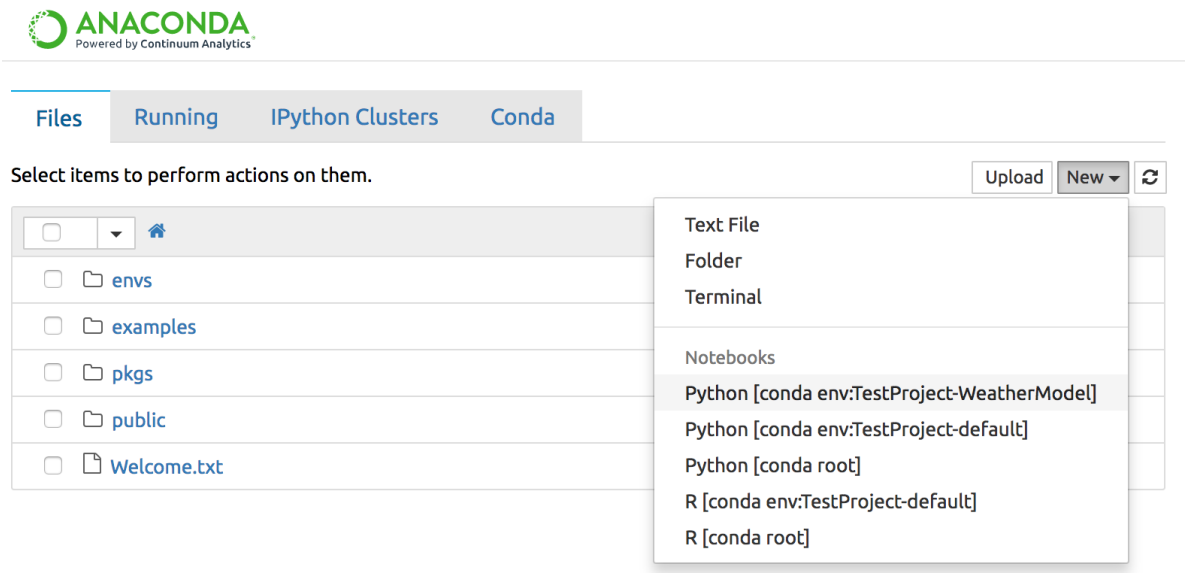
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select `Python [conda env:test1-my_env]`.

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

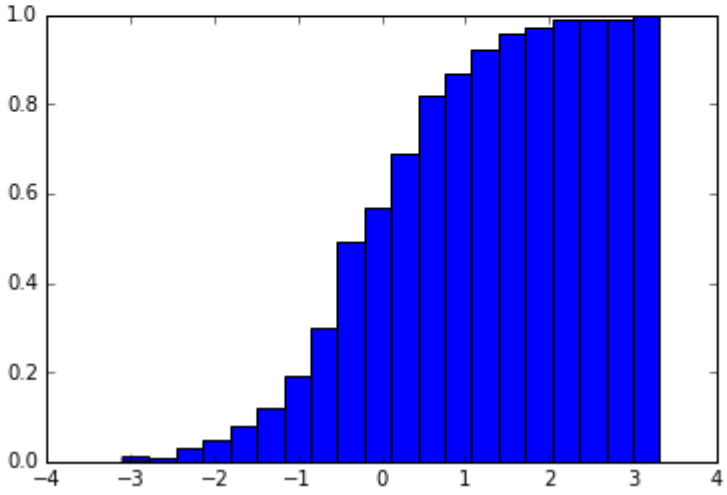
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

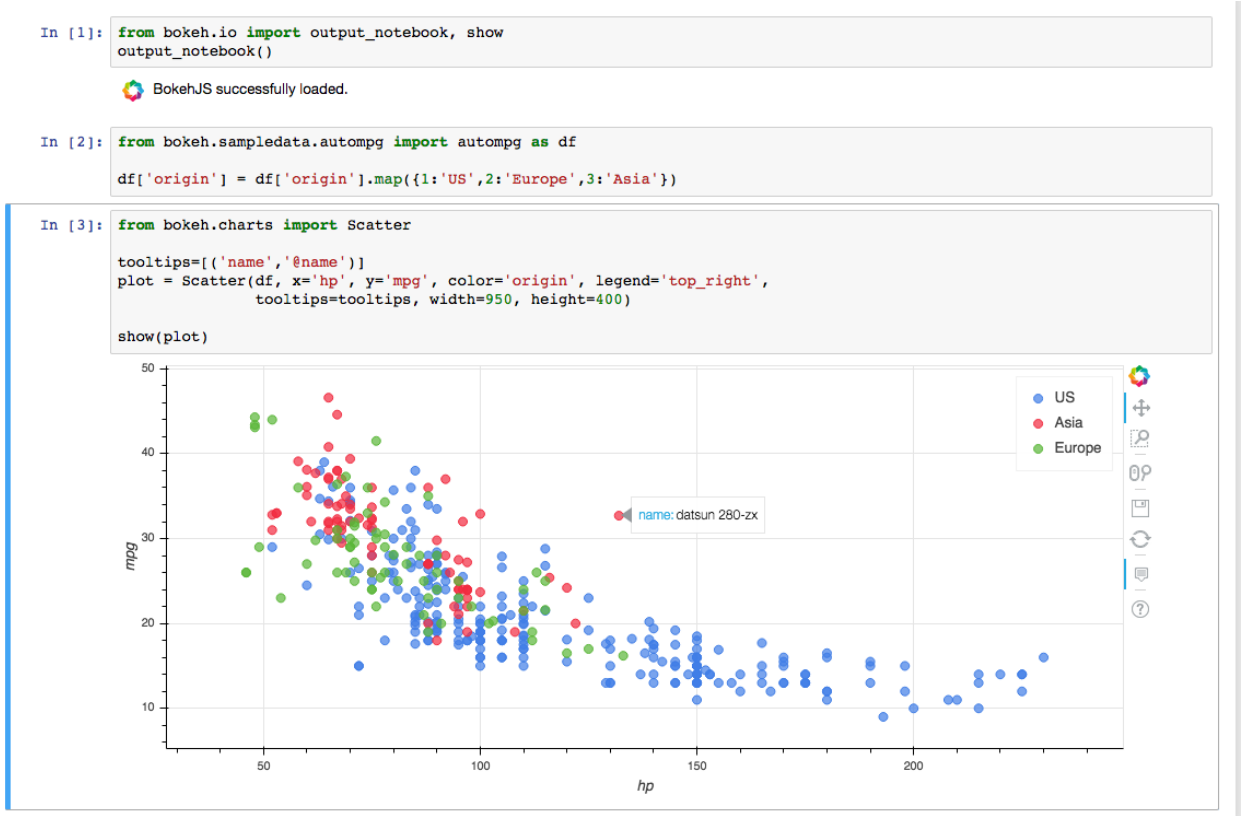
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

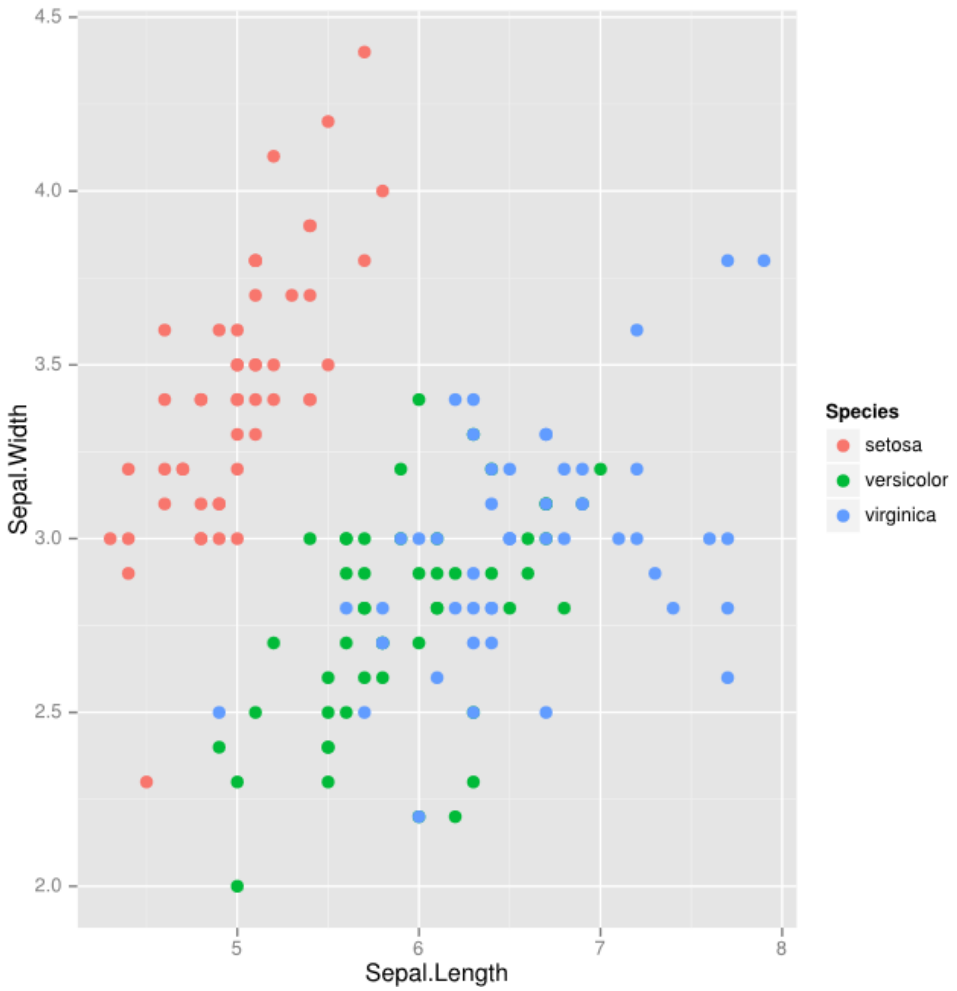
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the `$PATH` environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

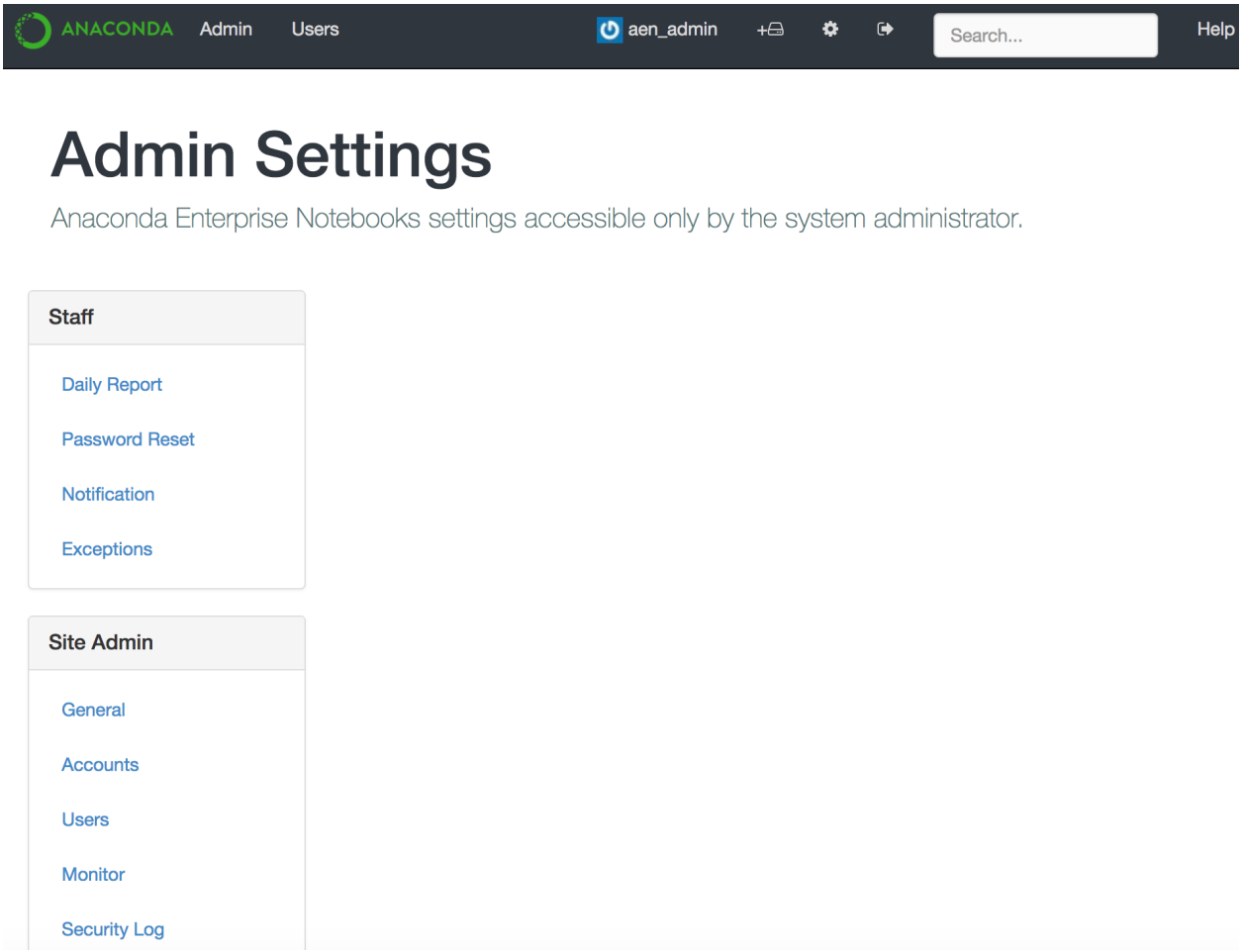
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



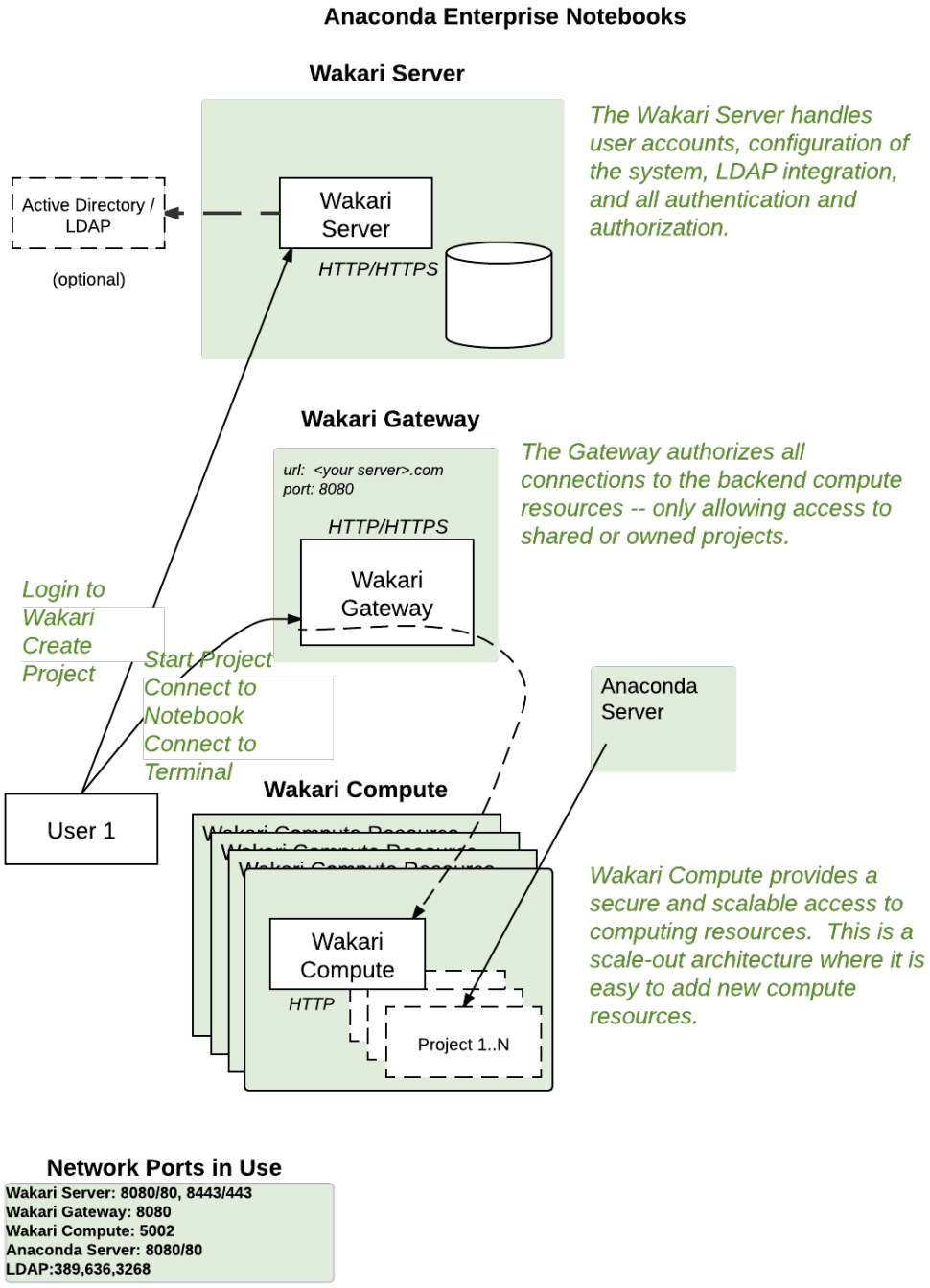
All of the other navigation bar items are the same as for a user account.

Concepts

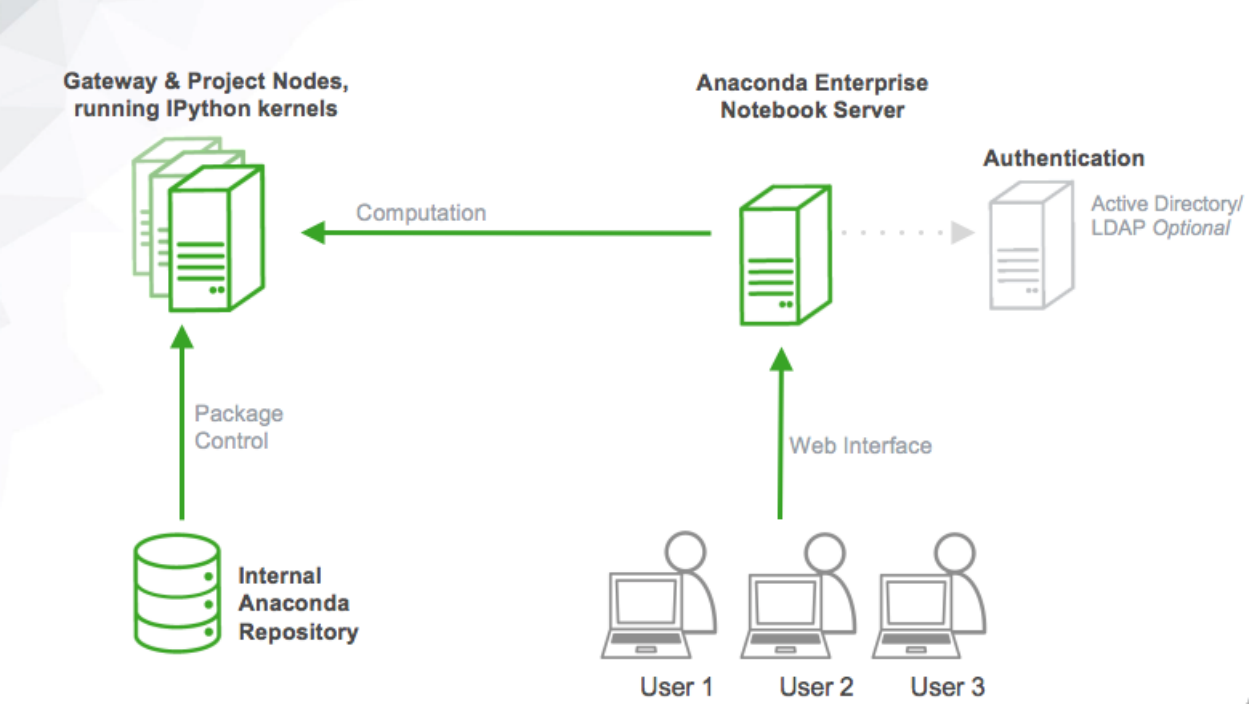
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Organizationally, each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for its internal data persistency. It is typically run on the same host as the server but can also be *installed* on a separate host.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web-process which runs on a high numbered port that only listens on localhost. NGINX is also responsible for static content.

Server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is: `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

Wk-compute loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually wakari or aen_admin.

The Supervisor daemon process is called "supervisord". It runs in the background and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name "default" into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

You can use a new conda environment to test a new version of a package before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, wakari or aen_admin.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Equal to or higher than version 2.6.8 and lower than version 3.0.
  - NGINX—Equal to or higher than version 1.6.2.
  - Elasticsearch—Equal to or higher than version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.3.0-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.3.0-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.3.0-Linux-x86_64.sh
```

NOTE: The current `$RPM_CDN` server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use `curl` or `wget` to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as `<AEN_SERVER_IP>` or `<AEN_SERVER_FQDN>`, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the `AEN_SUDO_CMD` environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an `AEN_SUDO_CMD` entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the `bzip2` package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.6.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.10.2-1.el7.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.3.0-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

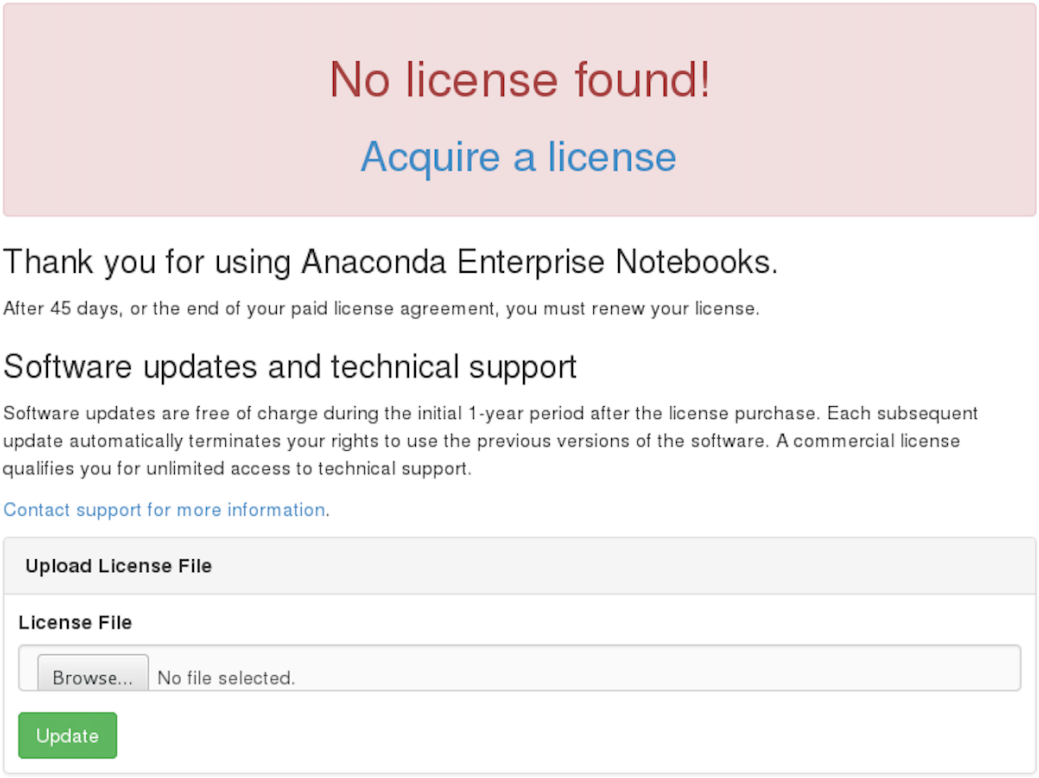
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

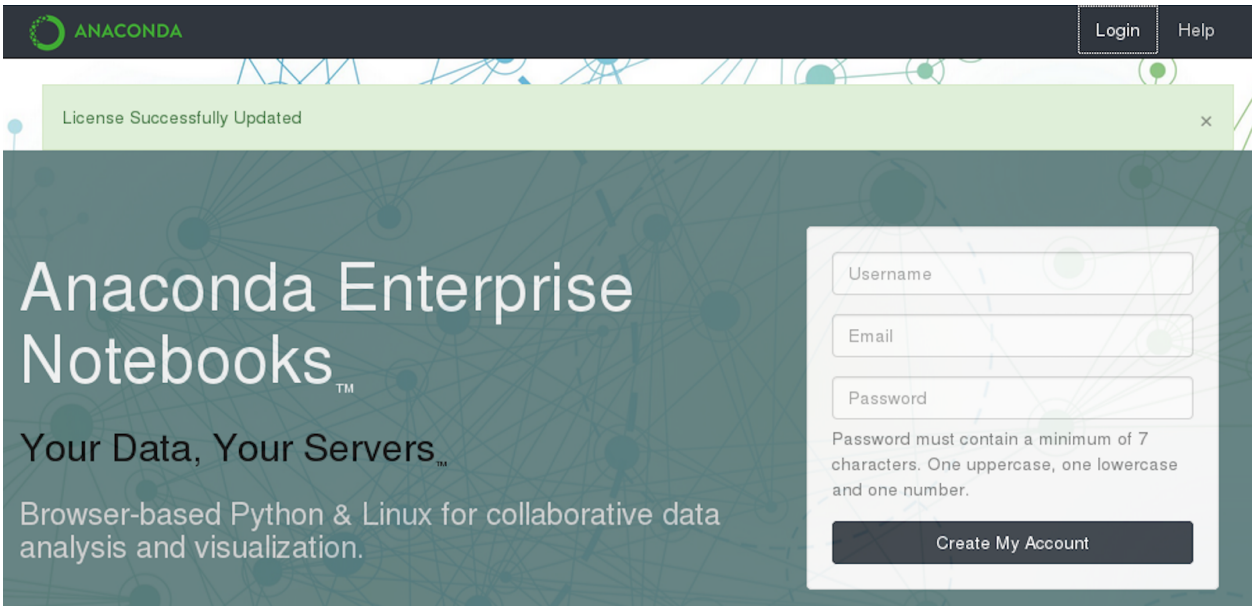
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.0-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

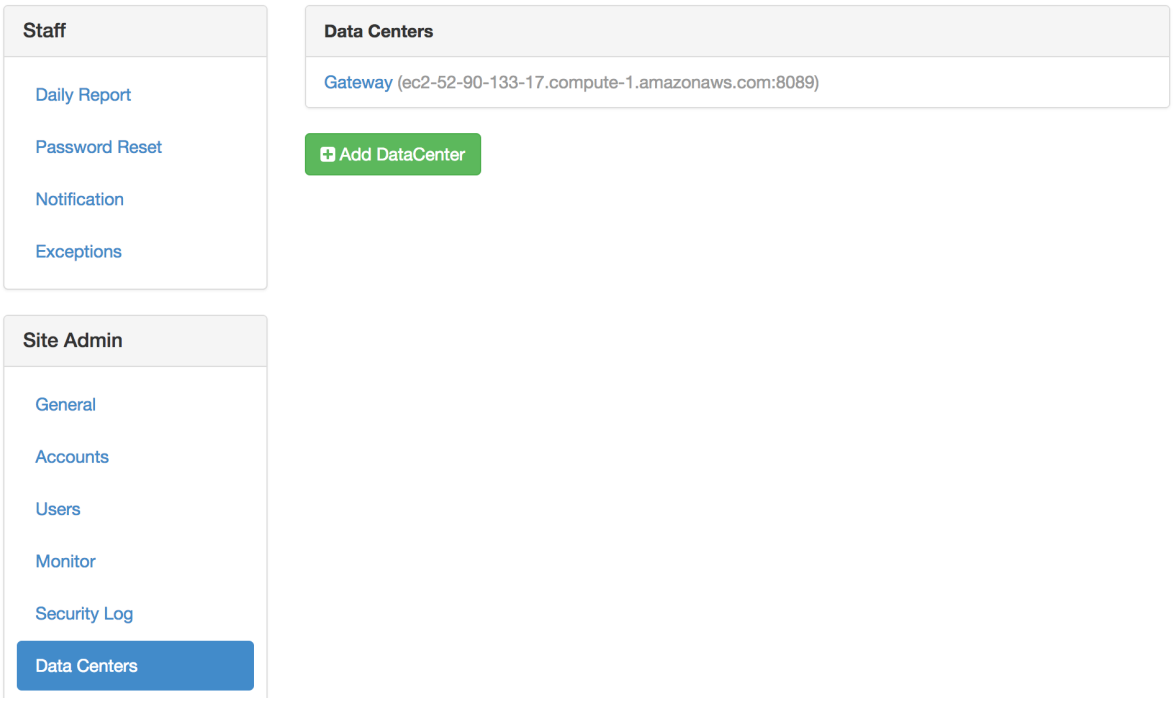
Starting the gateway

Run:

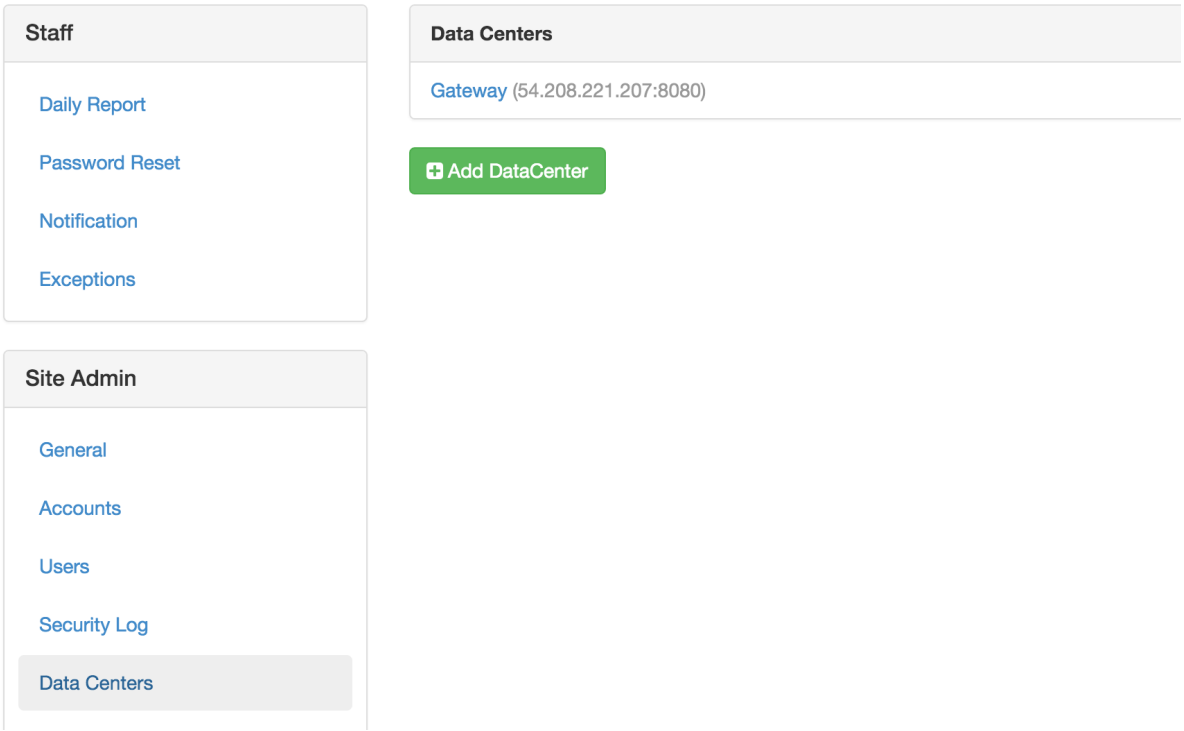
```
sudo service wakari-gateway start
```

Verifying your gateway registration

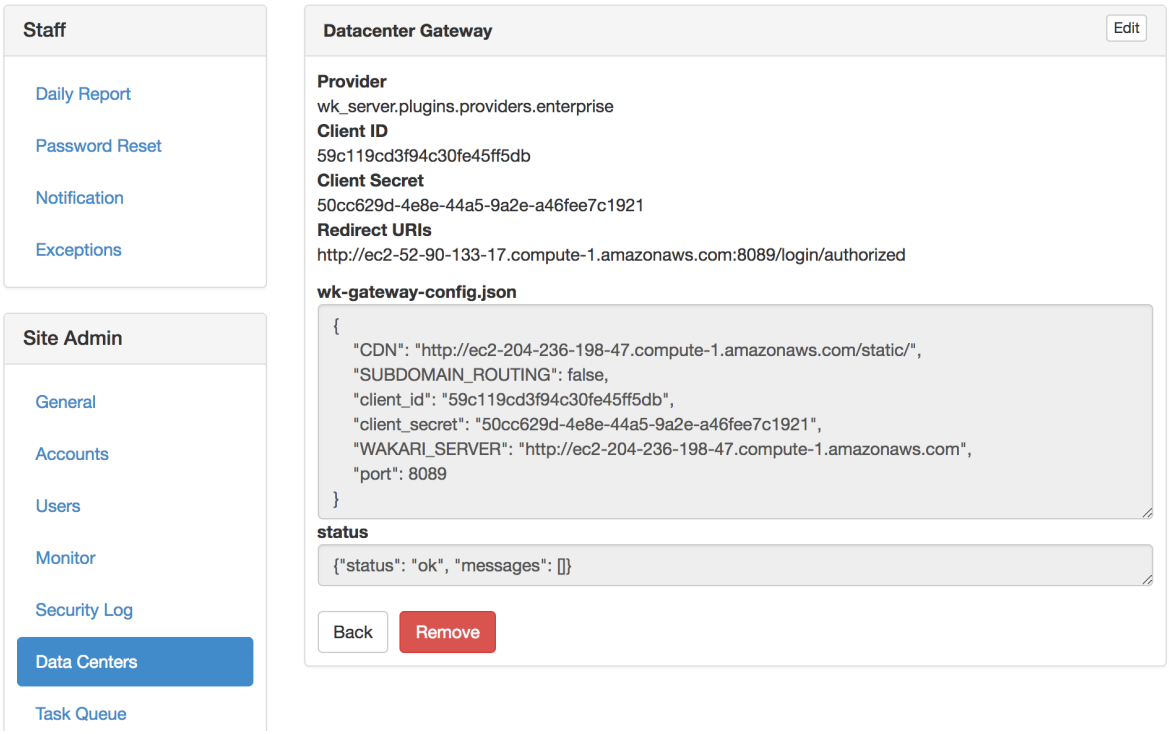
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal, to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.0-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

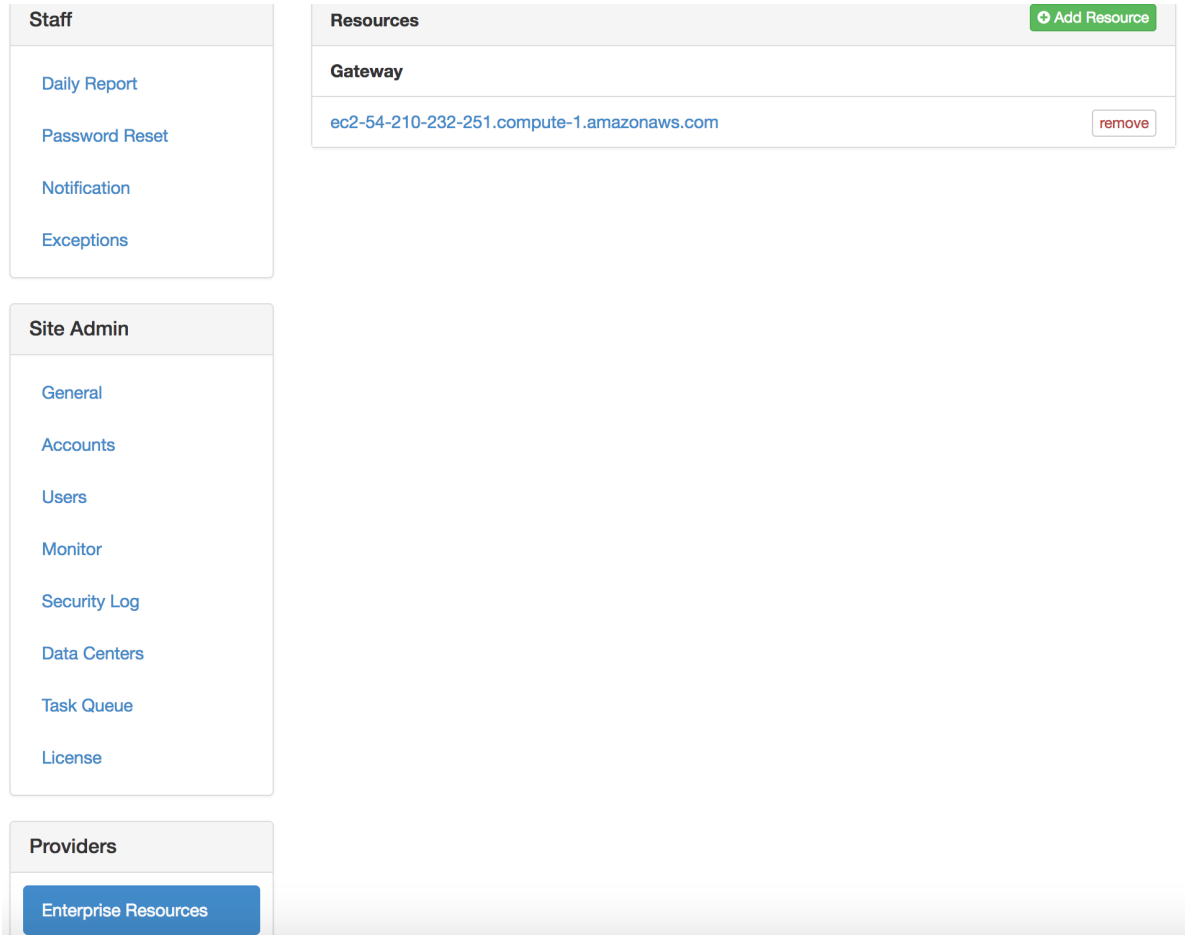
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

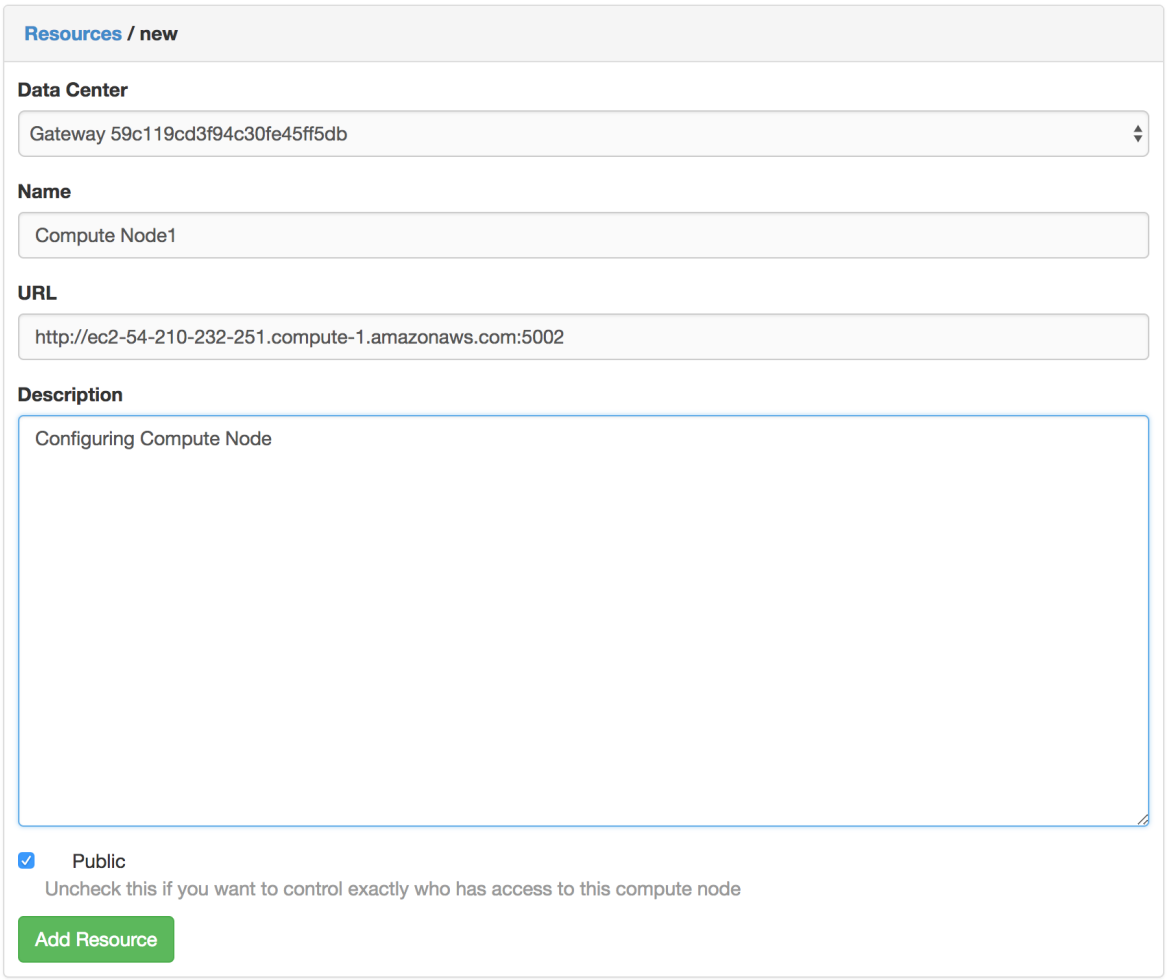
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the `AEN_SRVC_ACCT` user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda Repository server instead of Anaconda.org.

To configure AEN to use a local on-site Repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.anaconda.com
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with Repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo access is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

NOTE: Replace <`your Anaconda Repository`> with the actual name or IP address of your local Anaconda Repository installation.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 312: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled.
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set `uniqueEmail` to `false`, you must drop the existing index in the database. EXAMPLE: If the index name is `email_1`, run `db.users.dropIndex("email_1")`.

Table 313: Gateway Configuration Keys

Key	Default	Description
`WAKARI_SERVER`		The URL of the AEN `WAKARI_SERVER`.
`port`	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
`client_id`		The client ID assigned to this gateway by the server during `wk-gateway-configure`.
`client_secret`		The Client secret assigned to this gateway by the server during `wk-gateway-configure`.
`httpTimeout`	600	Timeout in seconds. The default is 10 minutes to allow project creation.
`logLevel`	`info`	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
`https`		Enable SSL encryption. For more information, see *Configuring SSL*.
`- key`		A https subkey–Path to gateway key.
`- cert`		A https subkey–Path to gateway cert.
`- ca`		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
`- passhphrase`		A https subkey–Passphrase required to decrypt SSL certs.

Table 314: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.

Table 315: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server.plugins.providers.enterprise"]	A list of compute provider classes.
MONGO_ACTION_LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM _EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 316: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 317: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari- compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

```
"httpTimeout": 600
```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the conda environment and project directories are on separate filesystems, more disk space will be required on compute nodes and performance will be impacted.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

```
"projectRoot" : "/nfs/storage/services/wakari/projects",
```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the `identicalGID` key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: ALL
```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

```
"MANAGE_ACCOUNTS": false,
```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

   ```
   "AEN_SUDO_CMD": "/path/to/alternative/sudo",
   ```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
   ```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

   ```
   "AEN_SUDO_SH": "/path/to/gatekeeper"
   ```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.

3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.

4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.

5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.

8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

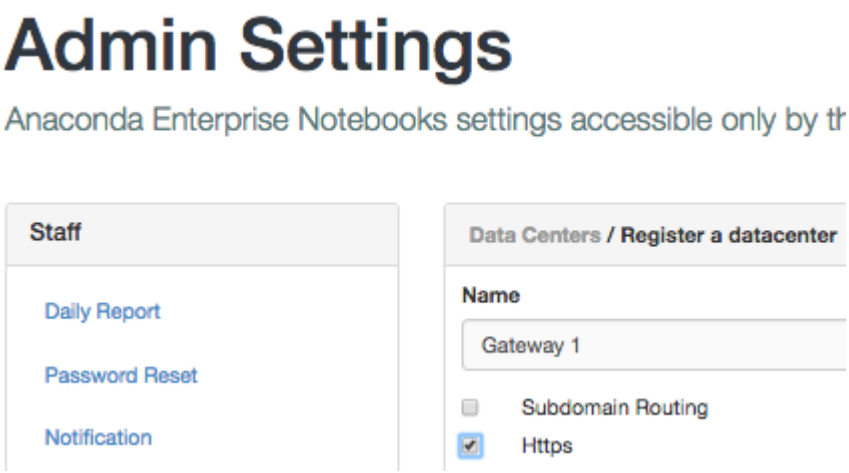
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

   NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt"
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

   NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

   EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

```
{
EXISTING_CONFIGURATION,
"SECRET_KEY": "<repo signing secret>",
"REPO_LOGIN_URL":
   "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
}
```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

```
{
EXISTING_CONFIGURATION,
"accounts": "wk_server.plugins.accounts.repo",
}
```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The `jupyter-contrib-nbextensions` extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in `/opt/wakari/wakari-compute/share/jupyter/kernels/`.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel, without the user `.ipython` space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The `pyspark.sh` script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: `.local/share/jupyter/kernels/pyspark/`. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following `kernel.json` file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace `<username>` with the correct user name and `<project_name>` with the correct project name.

You may choose any name for the `display_name`.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"
```

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```
# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.3.0 from 4.2.2 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.2.2 upgrade instructions*
- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

   NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

   For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

   NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                              \
                 wakari-enterprise-server-conf-update=2.0.10
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

   Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

   AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

   Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.

9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.10
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

```
ps aux | grep wakari-indexer
```

NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

Terminate any remaining `wakari-indexer` processes:

```
sudo killall wakari-indexer
```

NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

```
ps aux | grep wk-app-gateone
ps aux | grep wk-app-workbench
ps aux | grep wk-app-viewer
ps aux | grep wk-app-terminal
ps aux | grep jupyter-notebook
```

NOTE: If you stopped all the projects, you will not see any AEN app processes running.

Terminate any remaining AEN application processes by running one or more of the following:

```
sudo killall wk-app-gateone
sudo killall wk-app-workbench
sudo killall wk-app-viewer
sudo killall wk-app-terminal
sudo killall jupyter-notebook
```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

```
channels:
  - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
  - r
  - https://conda.anaconda.org/wakari
  - defaults

create_default_packages:
  - anaconda-client
  - ipykernel
```

   NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade *Anaconda* in the root environment:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
             -p /opt/wakari/anaconda              \
             --file aen-anaconda-update-4_3_0
popd
```

5. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
               -p /opt/wakari/wakari-compute        \
               --file aen-compute-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
               --no-deps                            \
               -p /opt/wakari/wakari-compute        \
               wakari-enterprise-compute-conf-update=2.0.14
popd
```

   NOTE: When upgrading the wakari-compute environment, you may see ImportError warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

6. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

7. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

8. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

9. Install necessary dependencies:

   NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

   NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

10. Start the compute service:

```
sudo service wakari-compute start
```

11. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

12. Restart the AEN Server with:

```
sudo service wakari-server restart
```

13. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_0

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4_3_0
popd
```

To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_3_0

sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4_3_0
popd
```

NOTE: Replace `<USER>` with the user's name. Replace `<PROJECT>` with the project name.

NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

NOTE: These commands update packages listed in `aen-anaconda-update-4_3_0` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

```
service wakari-server stop
```

2. Stop MongoDB:

```
service mongod stop
```

3. Remove AEN server software, AEN database files and NGINX configuration:

```
rm -Rf /opt/wakari/wakari-server
rm -Rf /opt/wakari/miniconda
rm -Rf /var/lib/mongo/wakari*
rm -Rf /etc/nginx/conf.d/www.enterprise.conf
```

   NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

```
service mongod restart
service nginx restart
```

5. Check for any outstanding server processes and stop them:

```
ps -ef | grep -e wakari-server -e wk-server
```

6. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

7. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

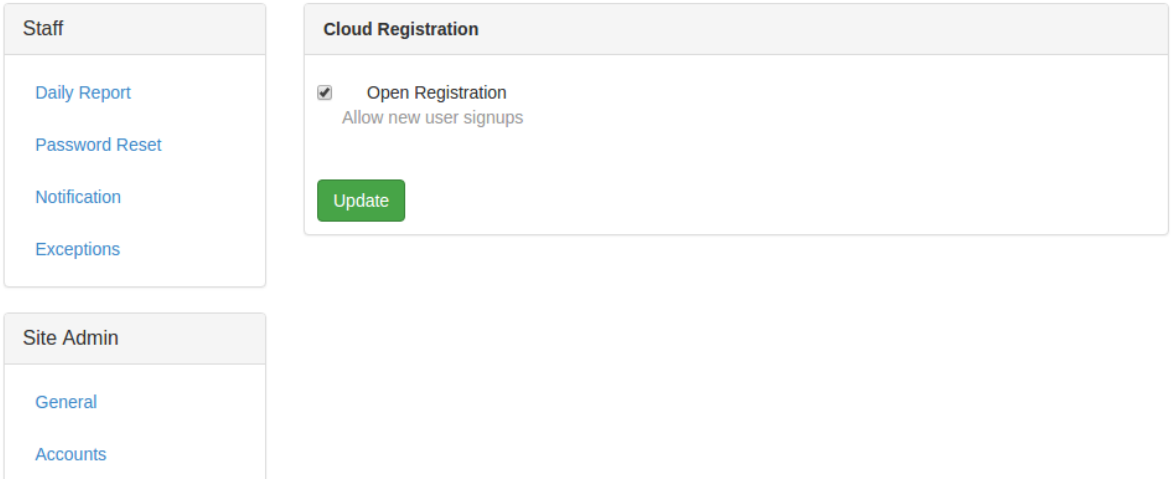
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

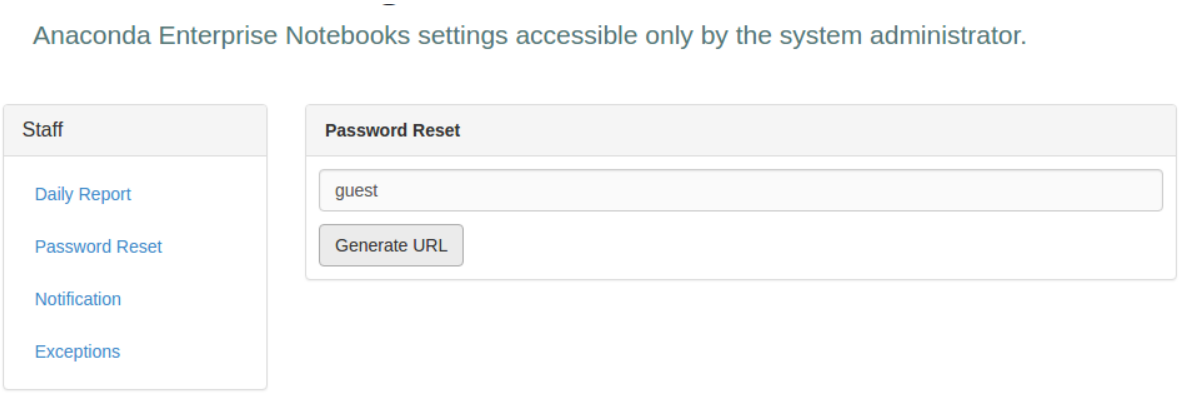
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.

2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

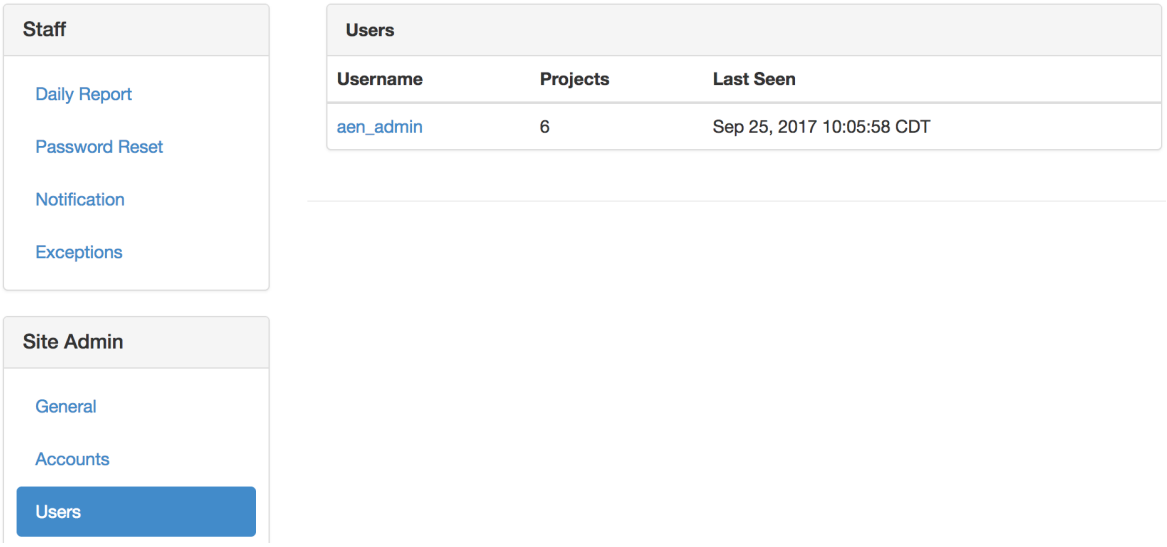
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

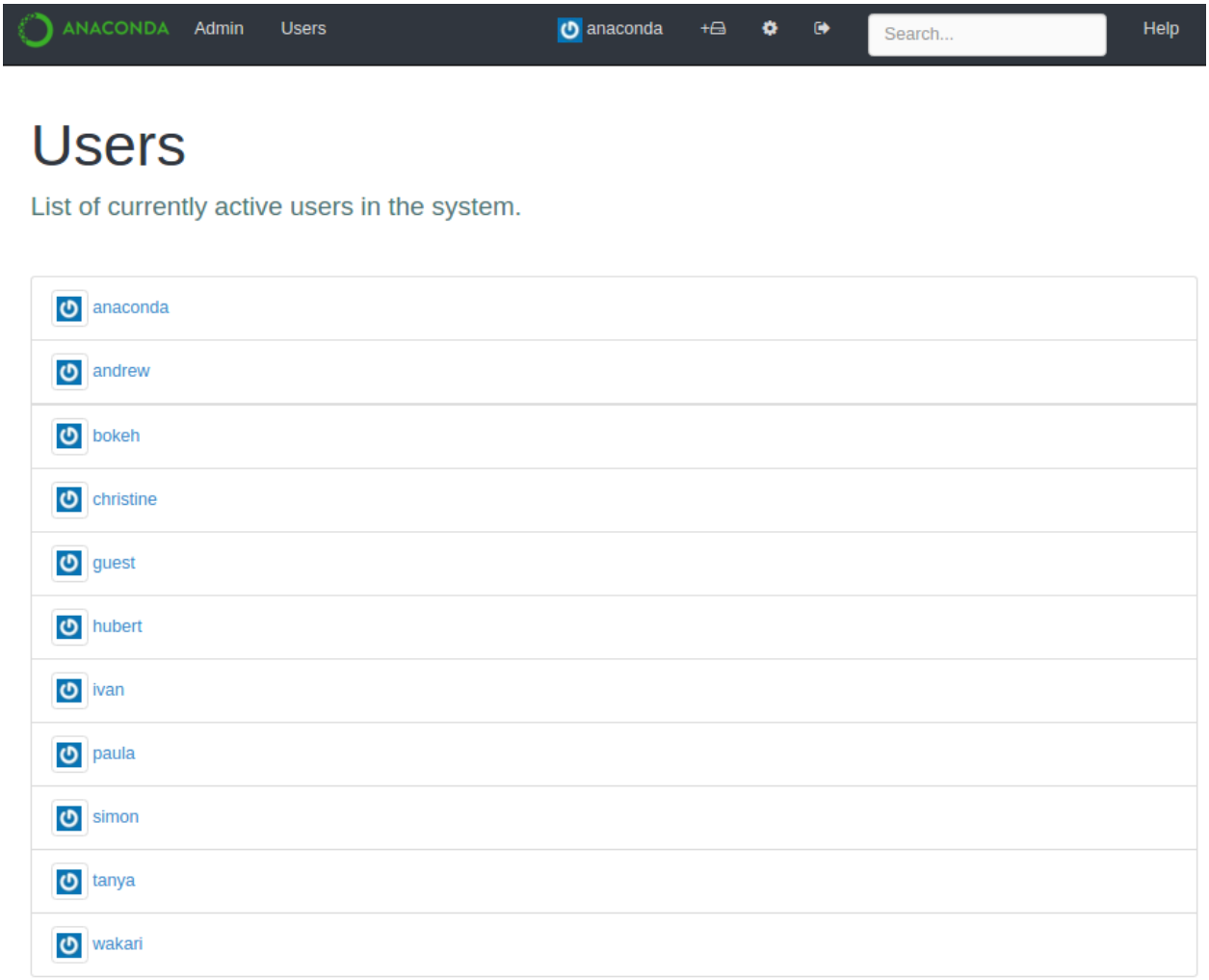
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

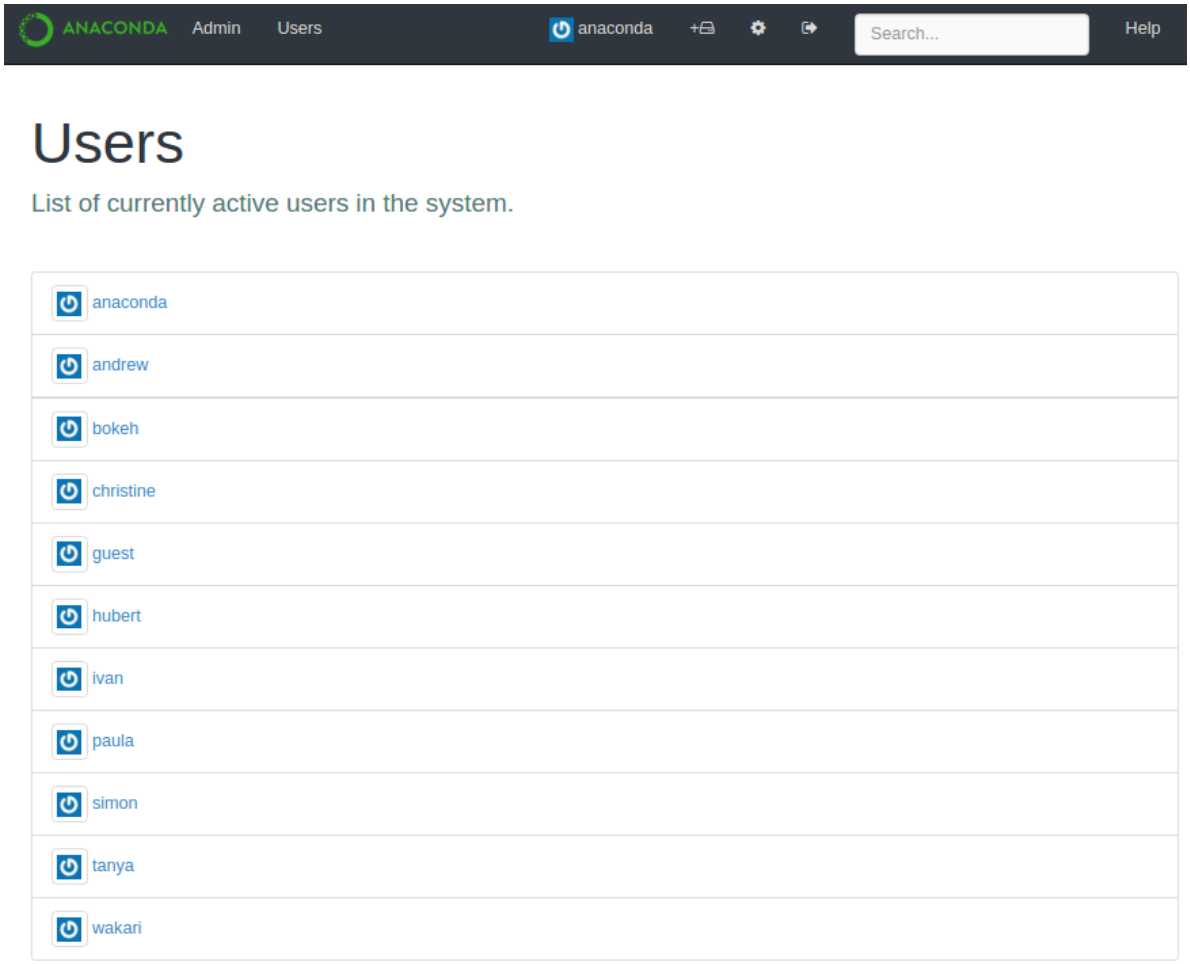


Click a username to open the user's profile page.

Viewing a user profile

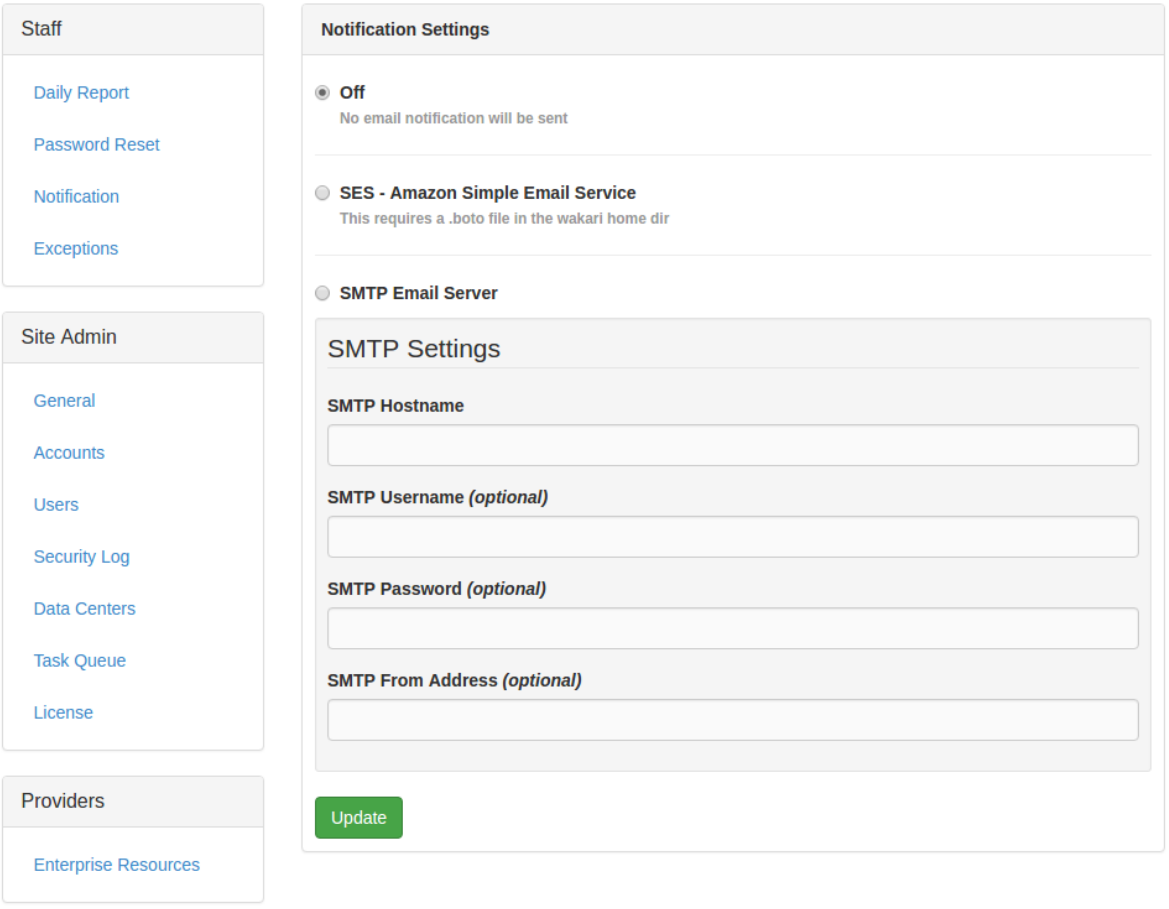
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

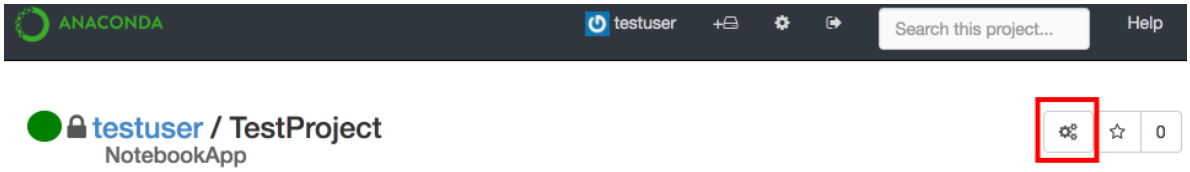
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

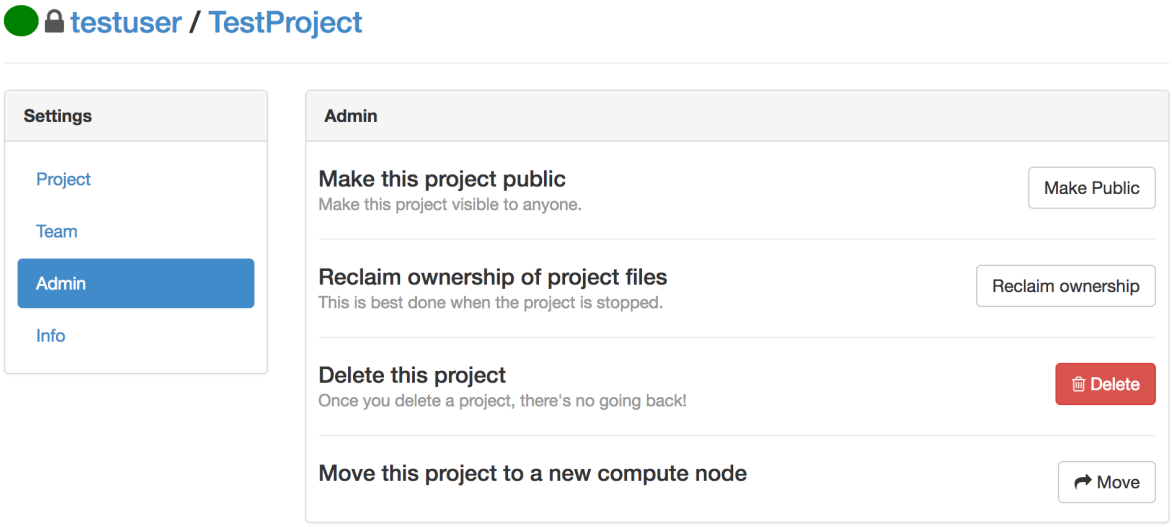
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

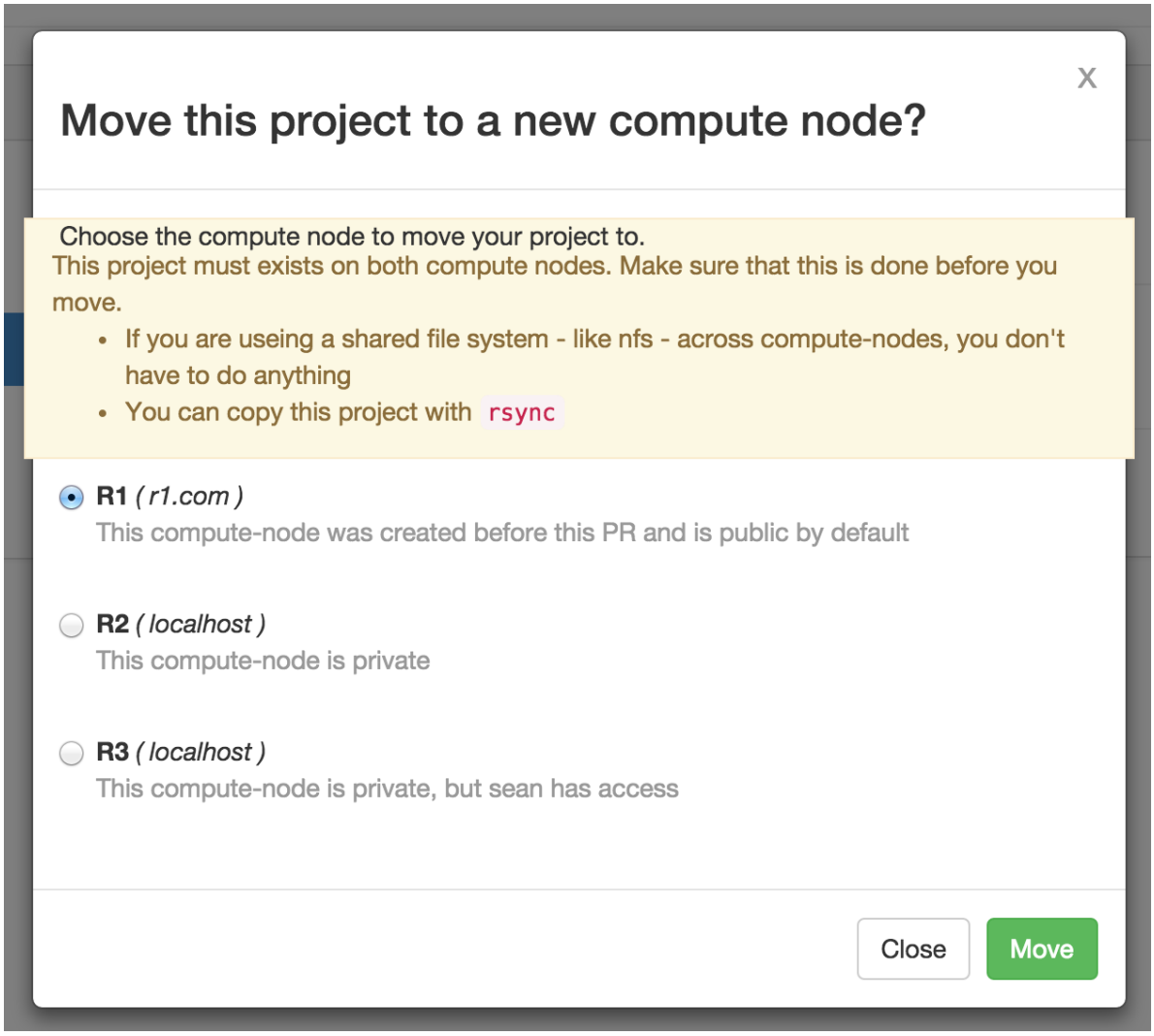
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

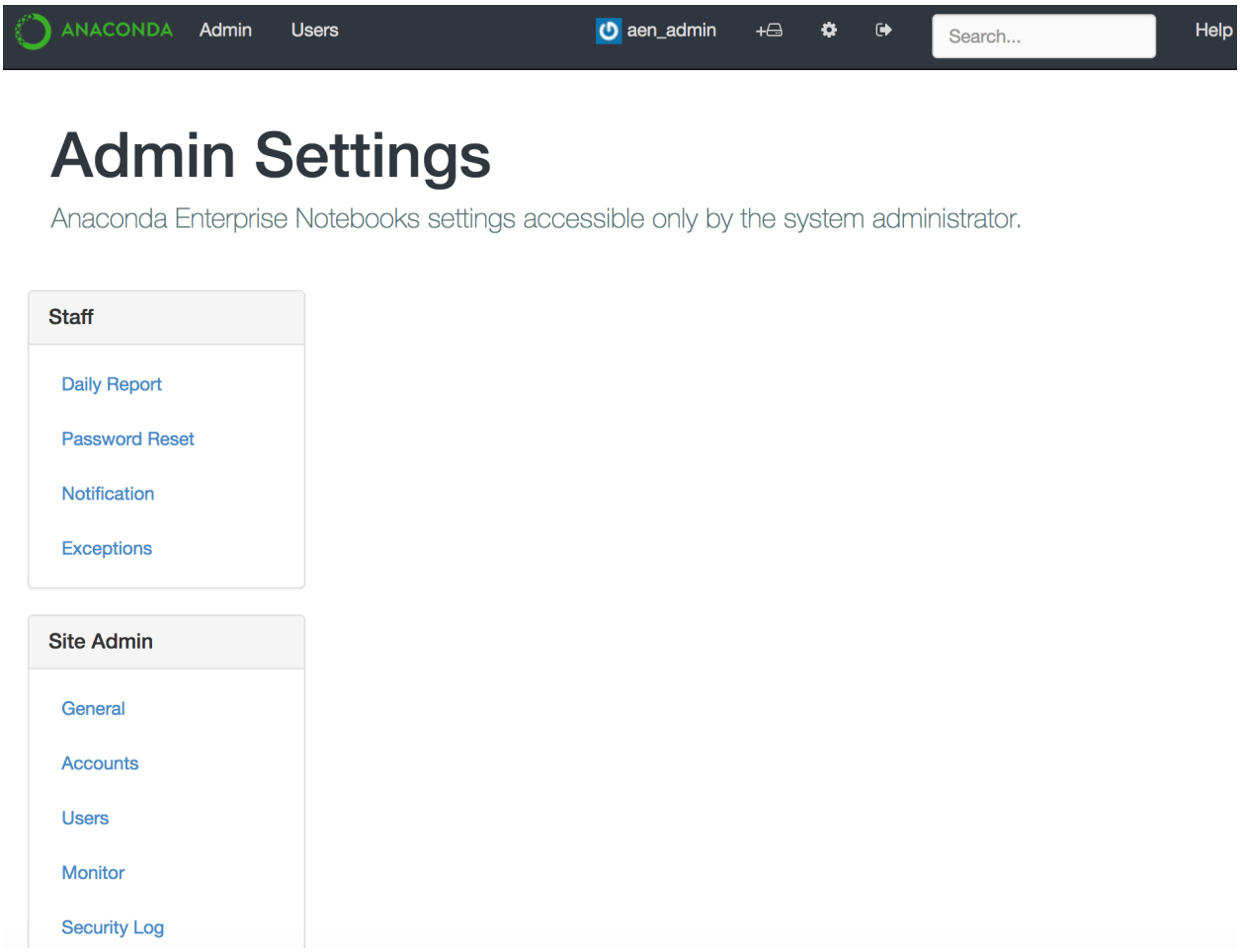
NOTE: Replace `<username>` with the actual username and `<projectname>` with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.3.0-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in `/opt/wakari/wakari-gateway/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change `<FQDN HOSTNAME OR IP ADDRESS>` to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal, to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.3.0-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

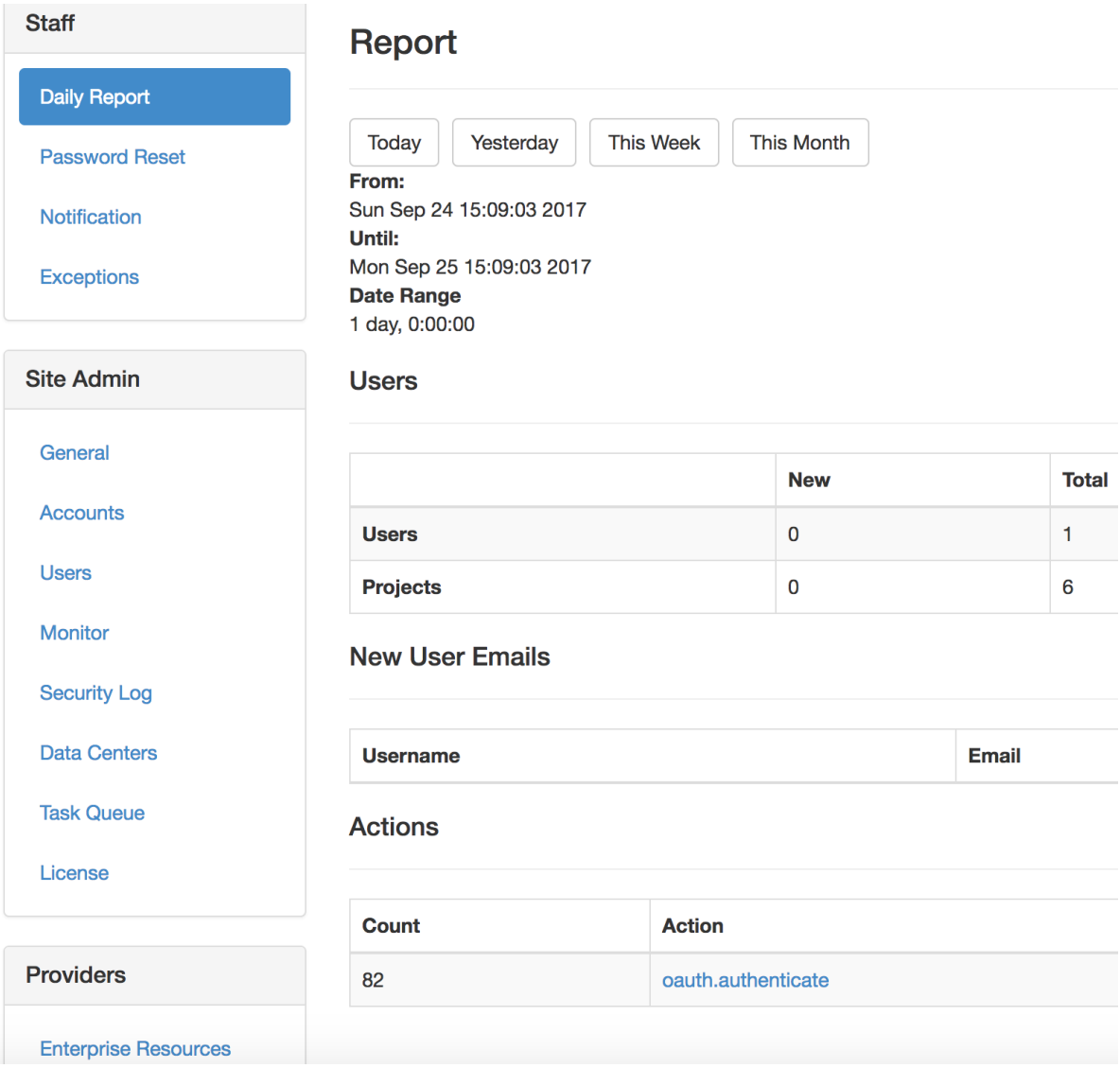
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



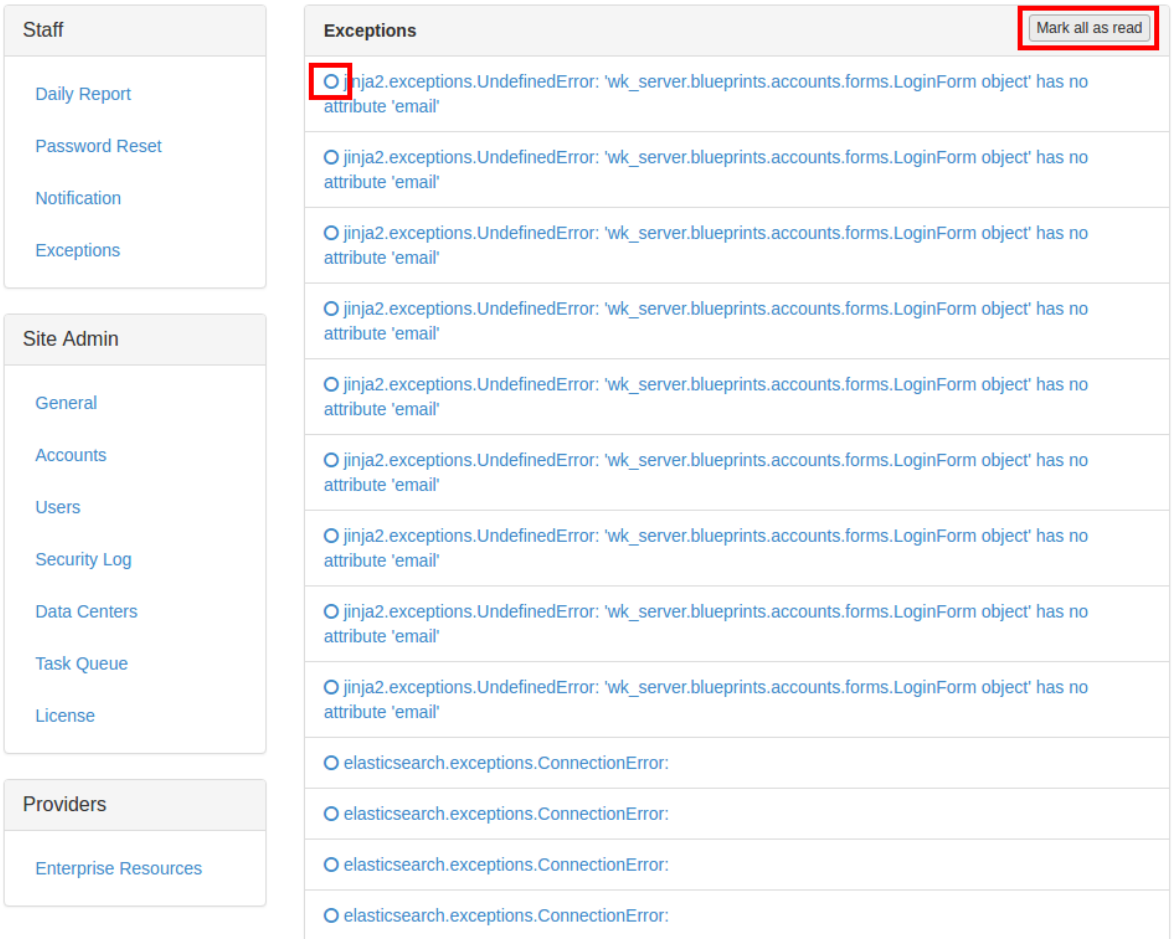
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

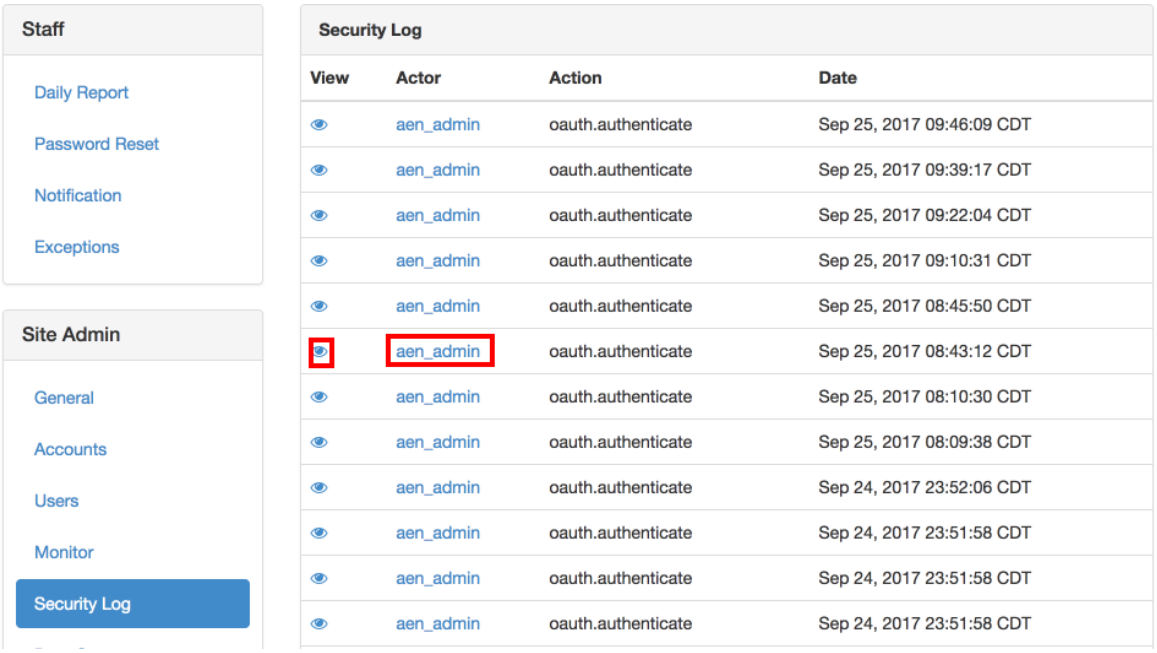
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

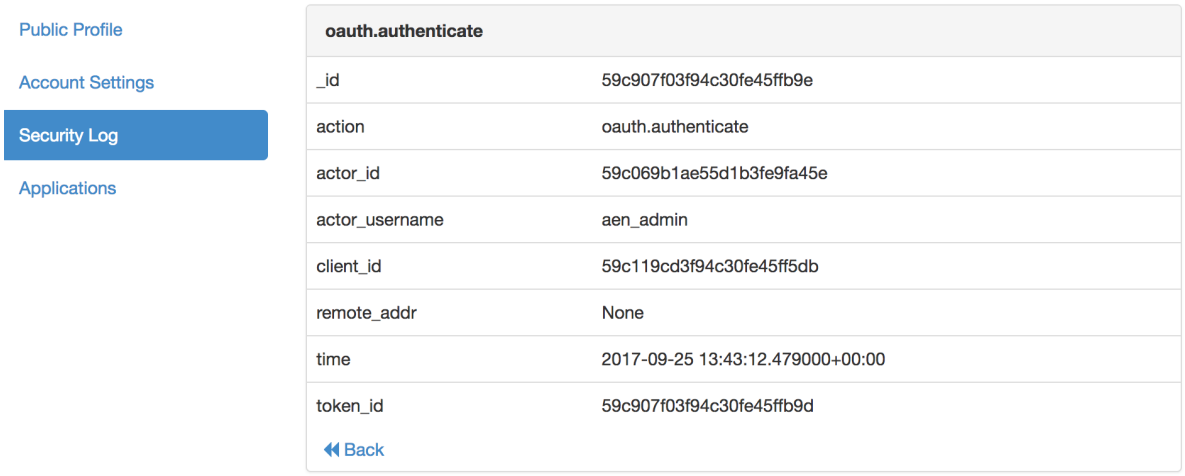
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

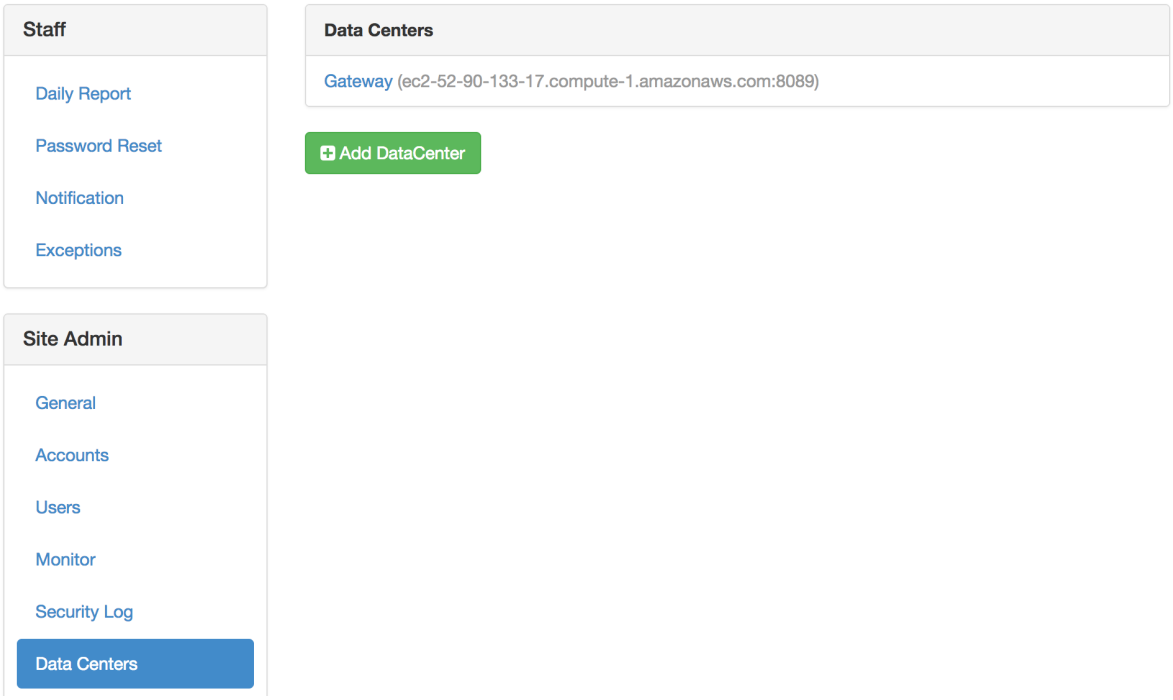
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

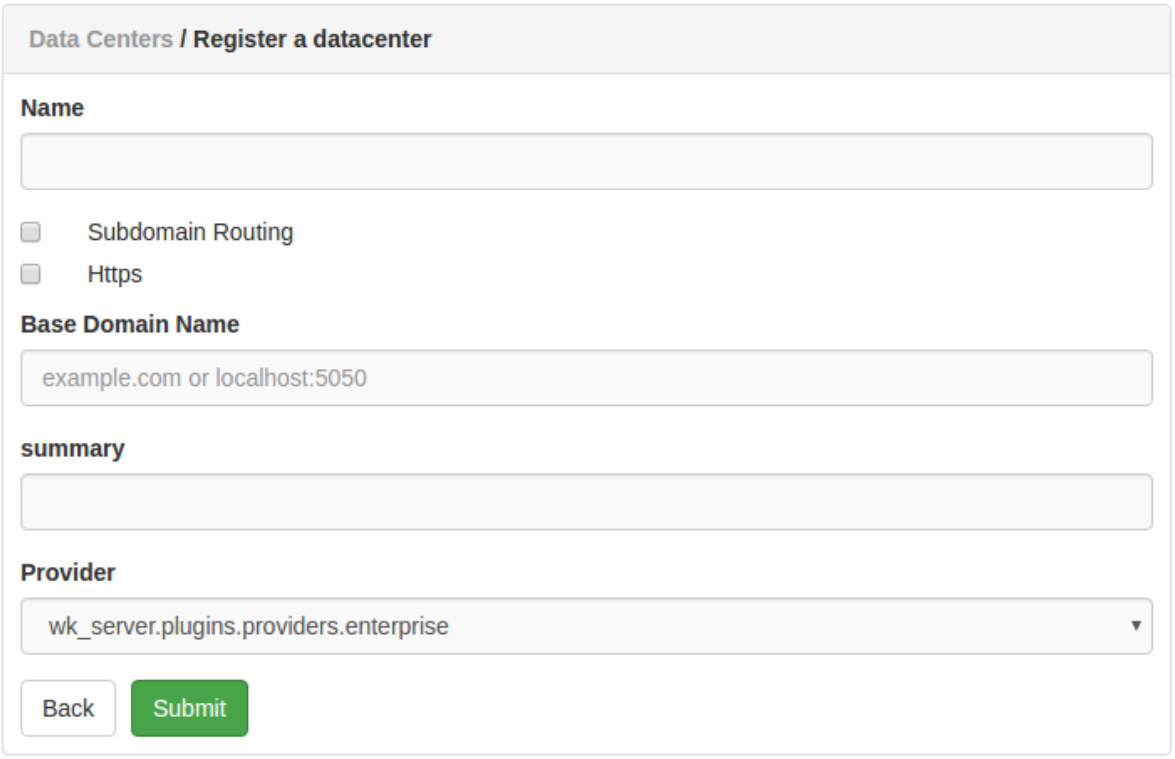
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

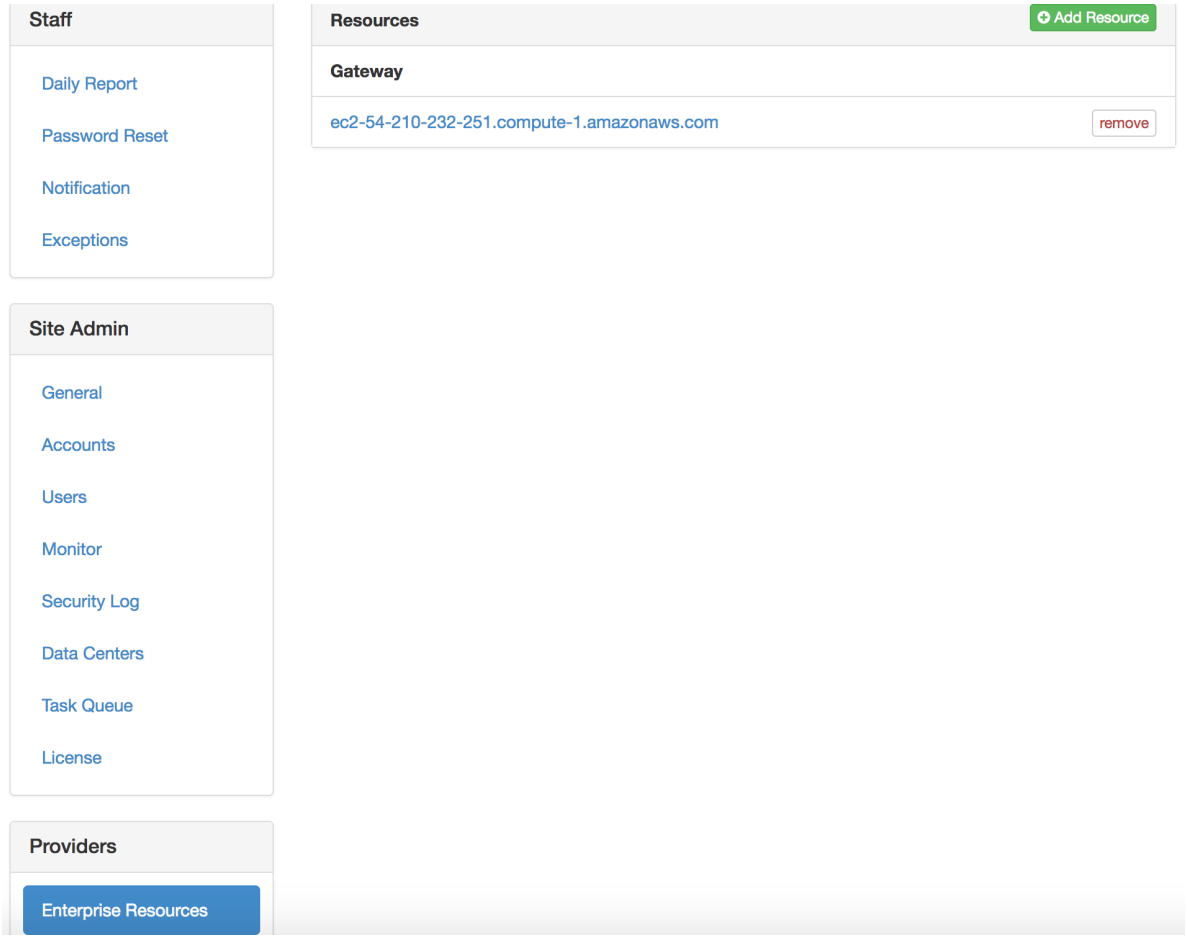
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

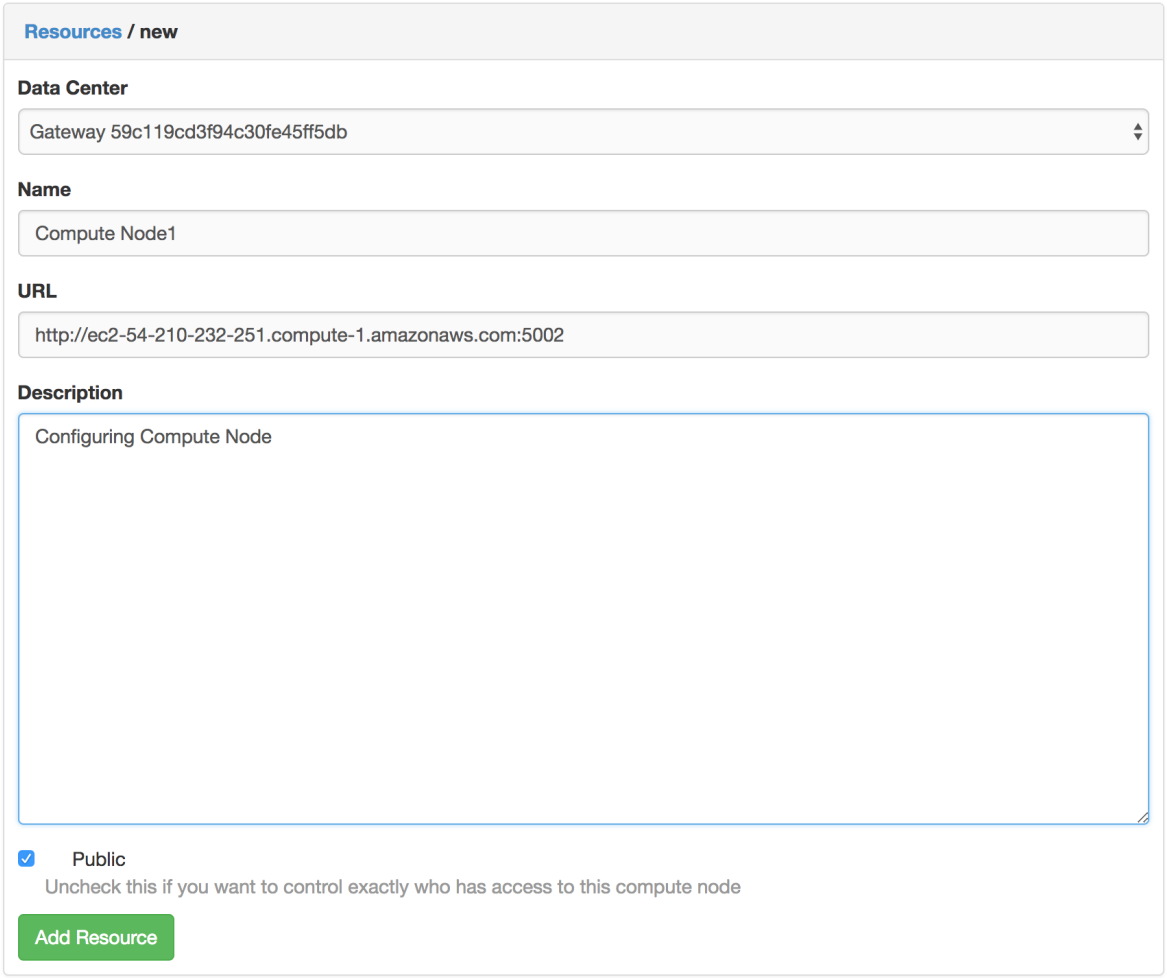
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

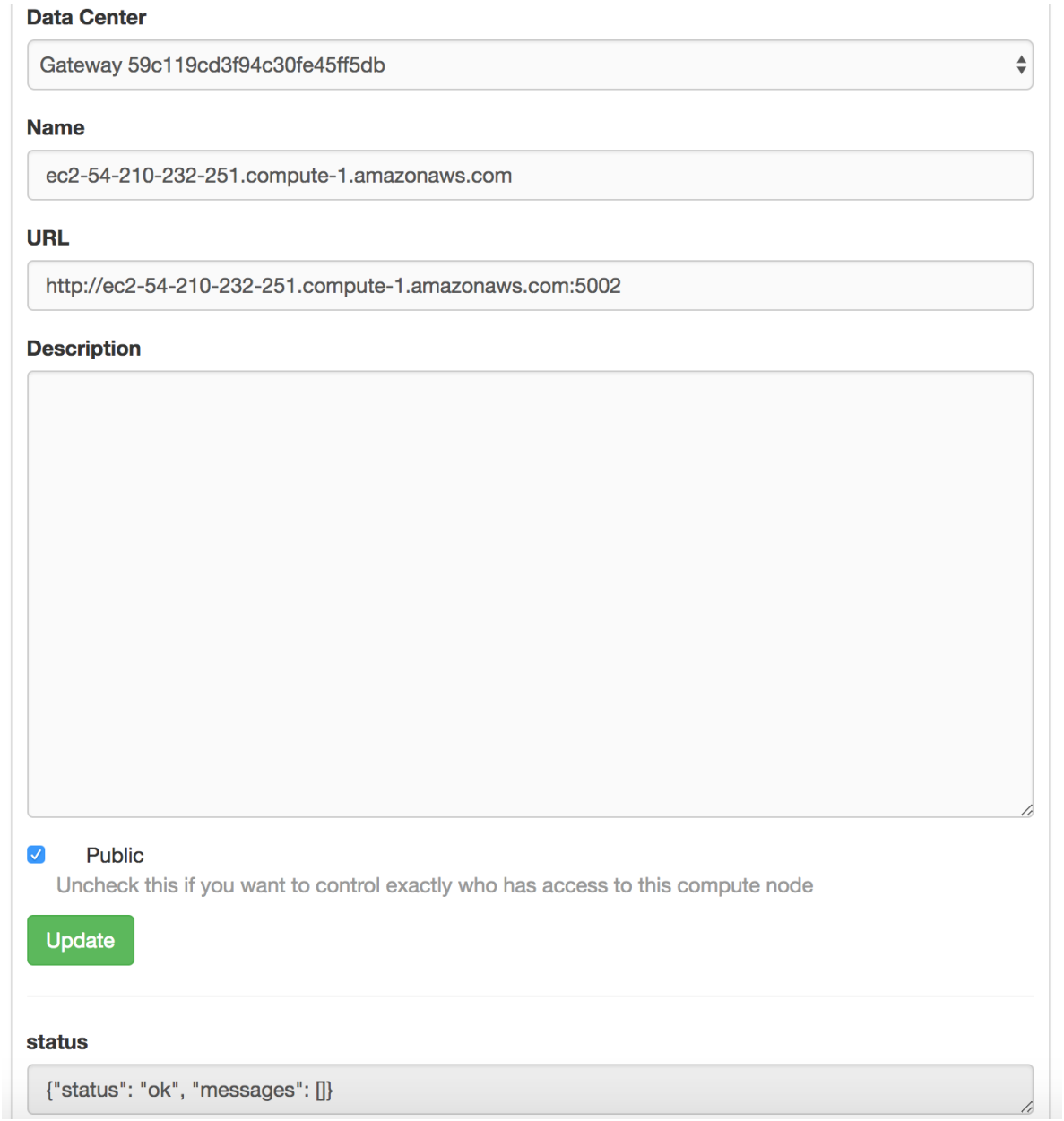
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

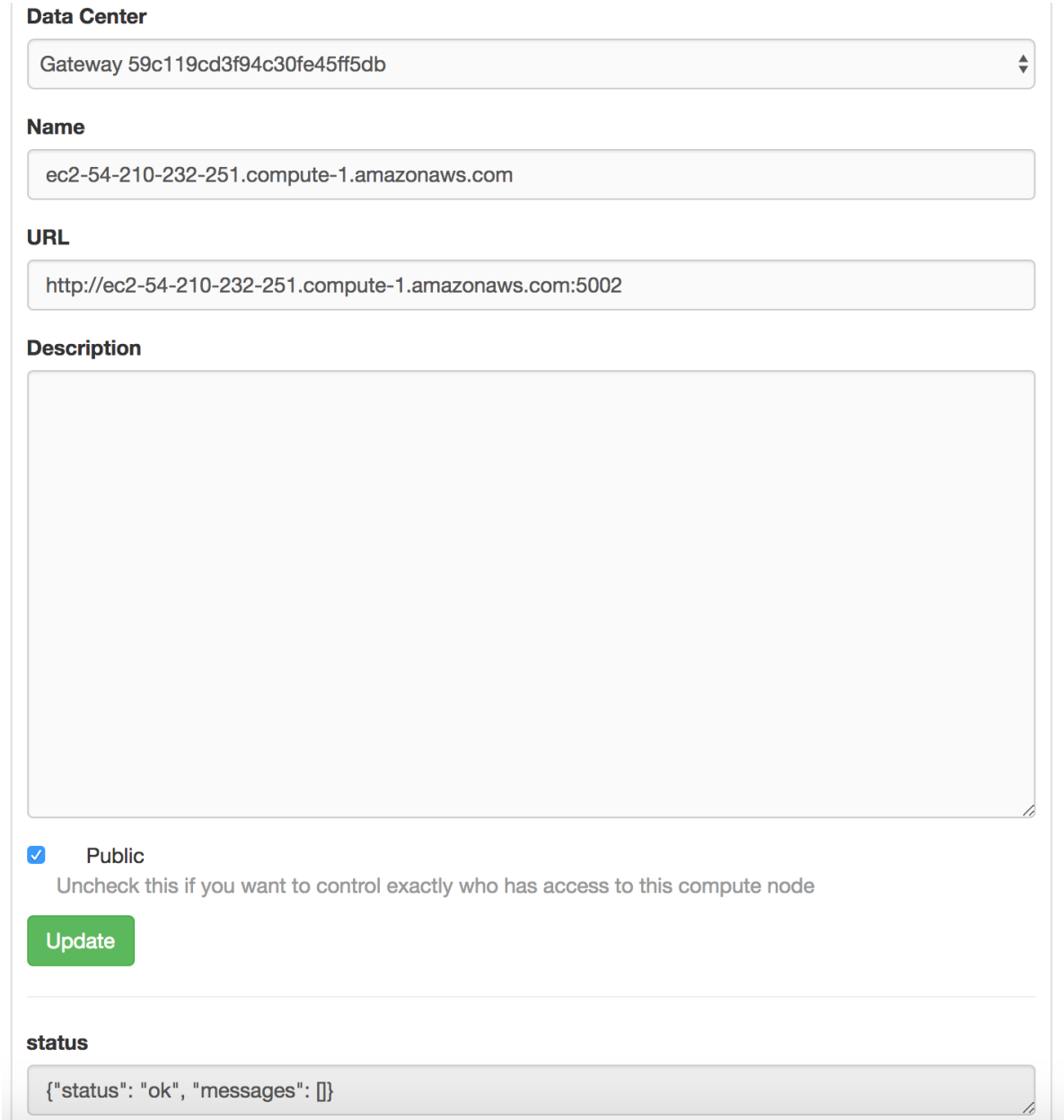
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, *move the project to a valid Compute Resource*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                    RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                       RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

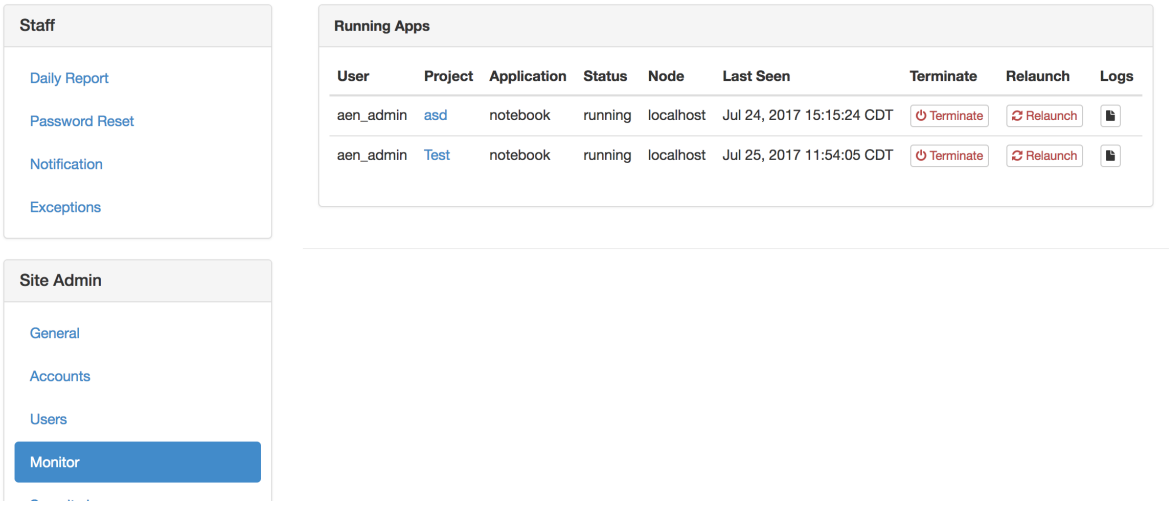
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

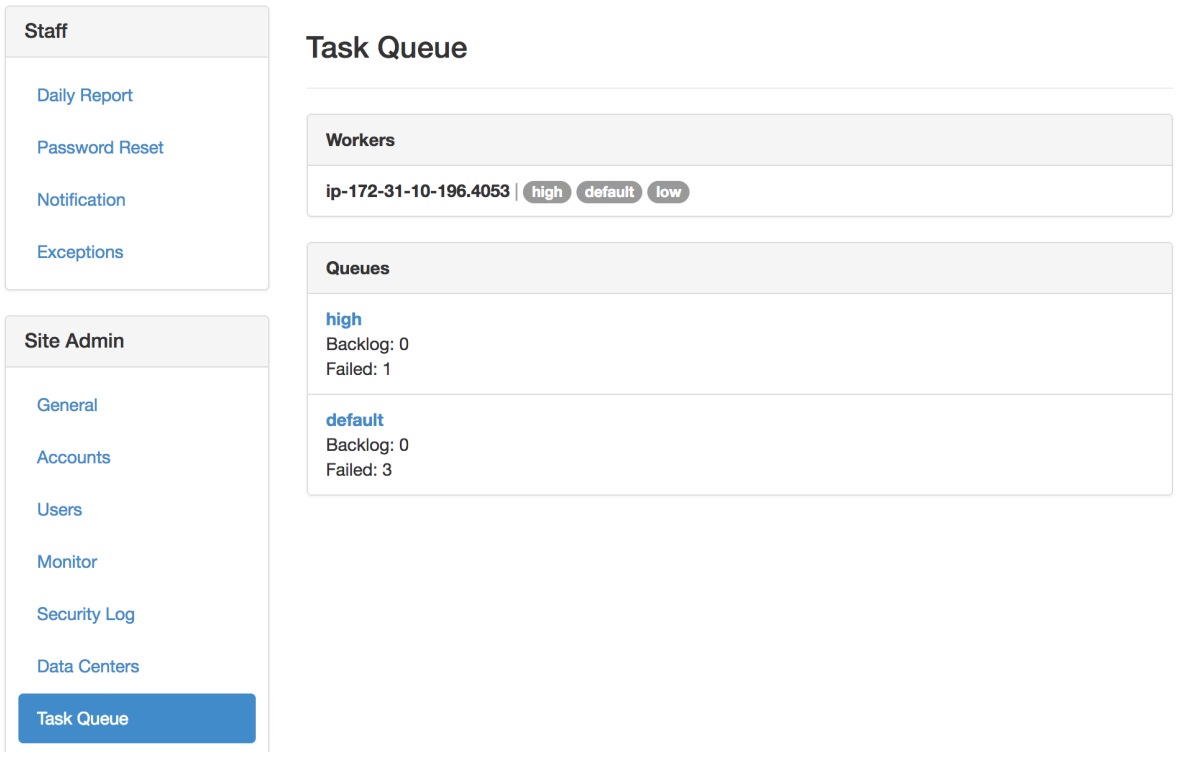
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

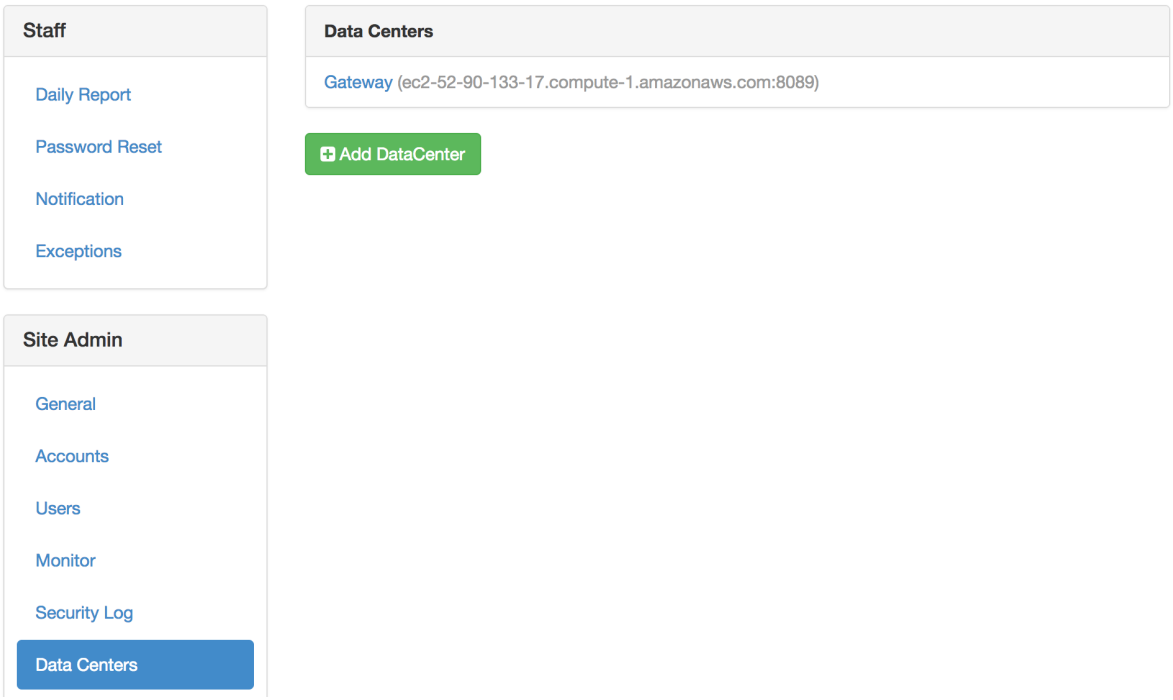
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



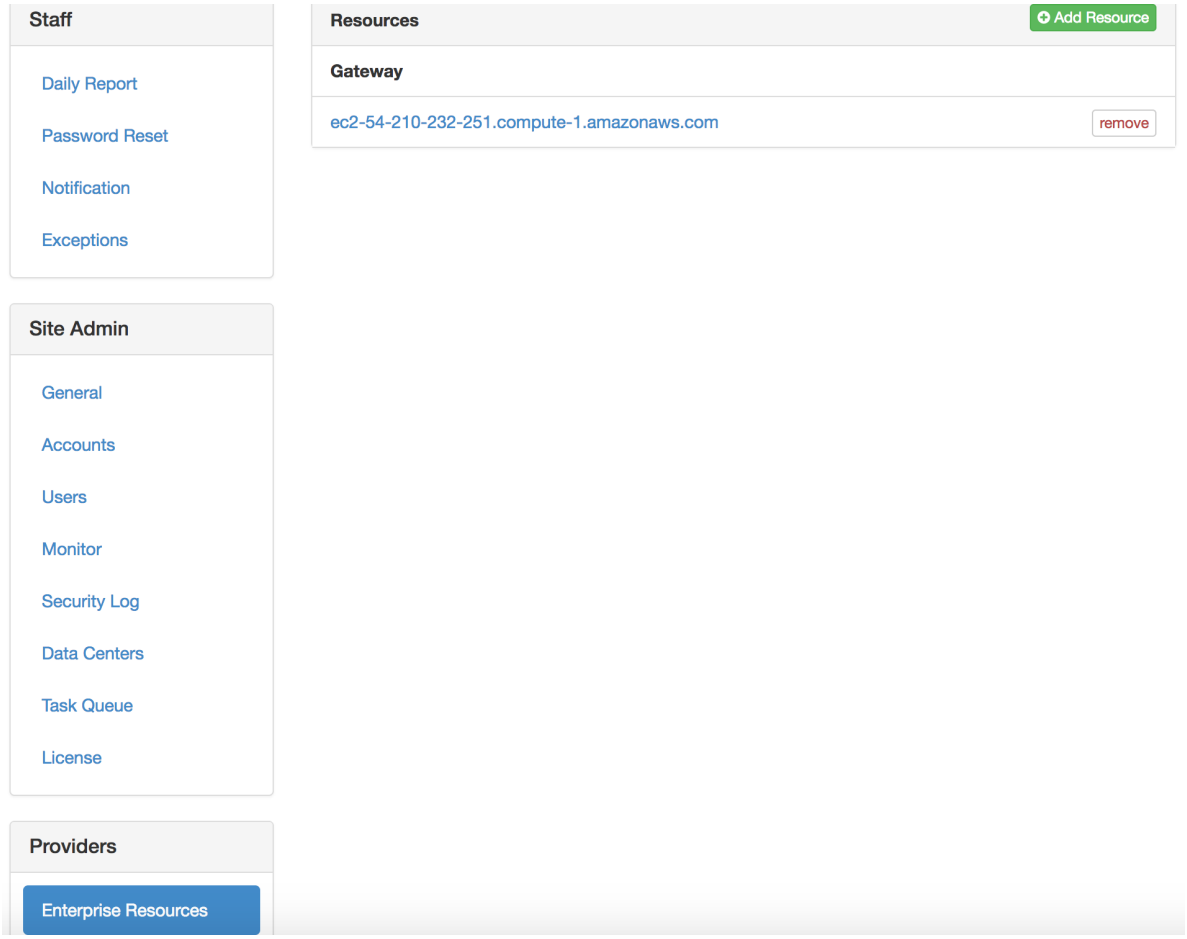
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

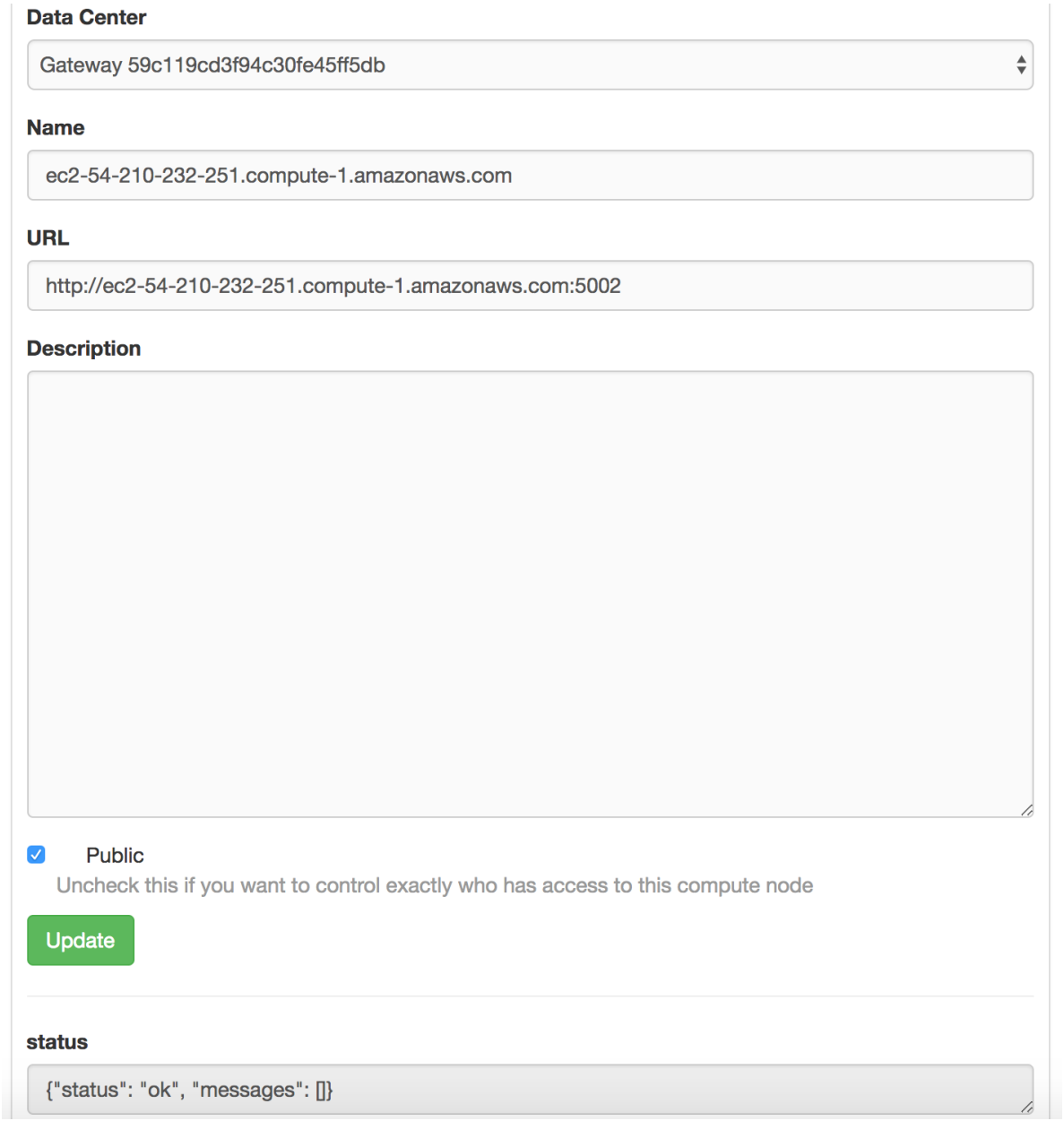
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

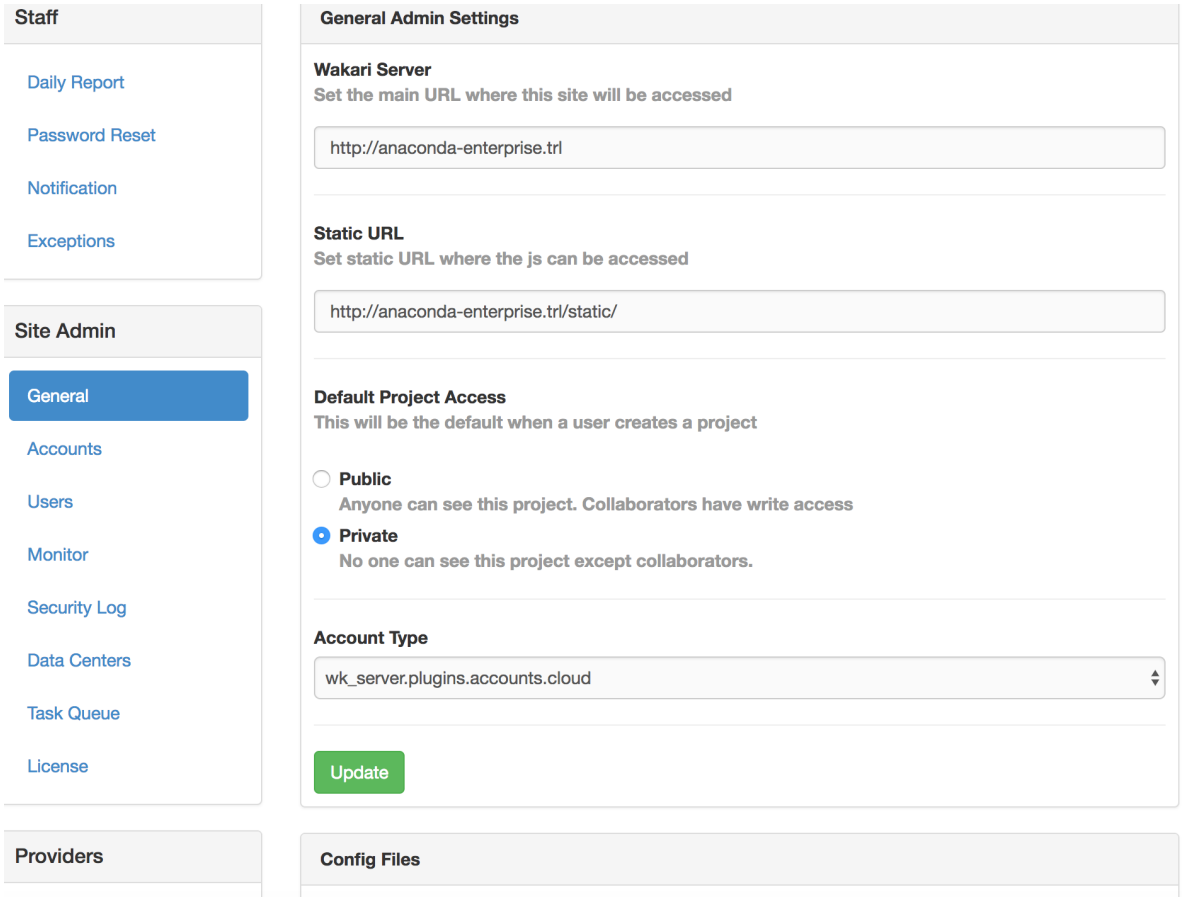
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

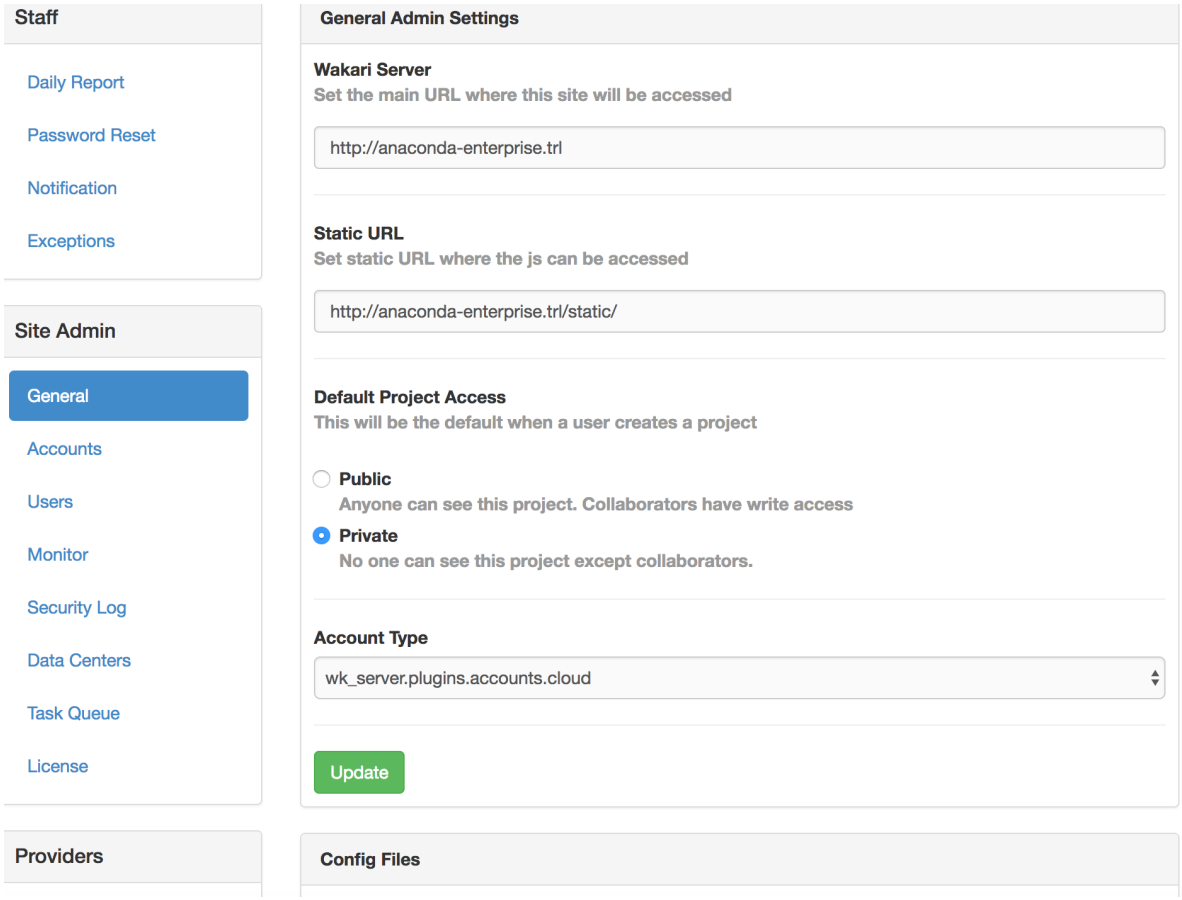
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

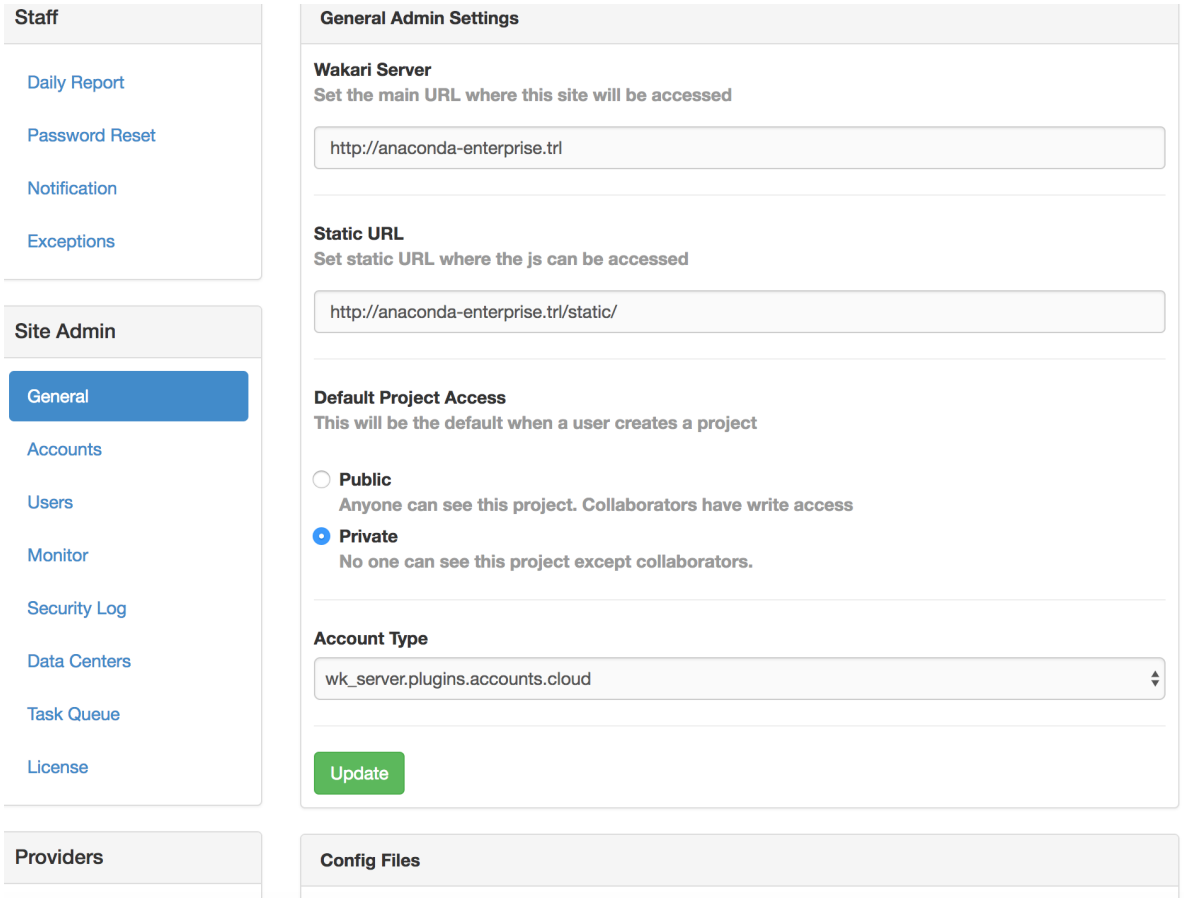
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

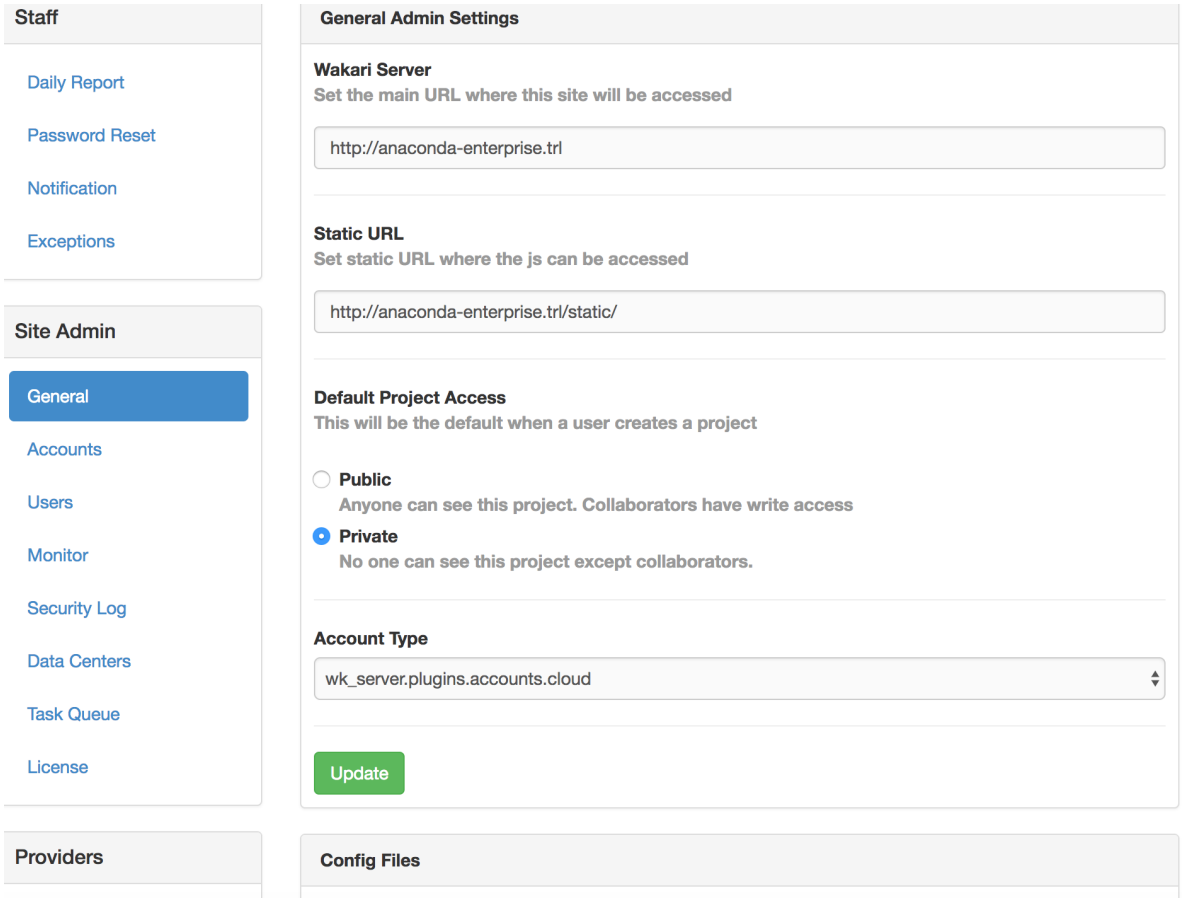
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

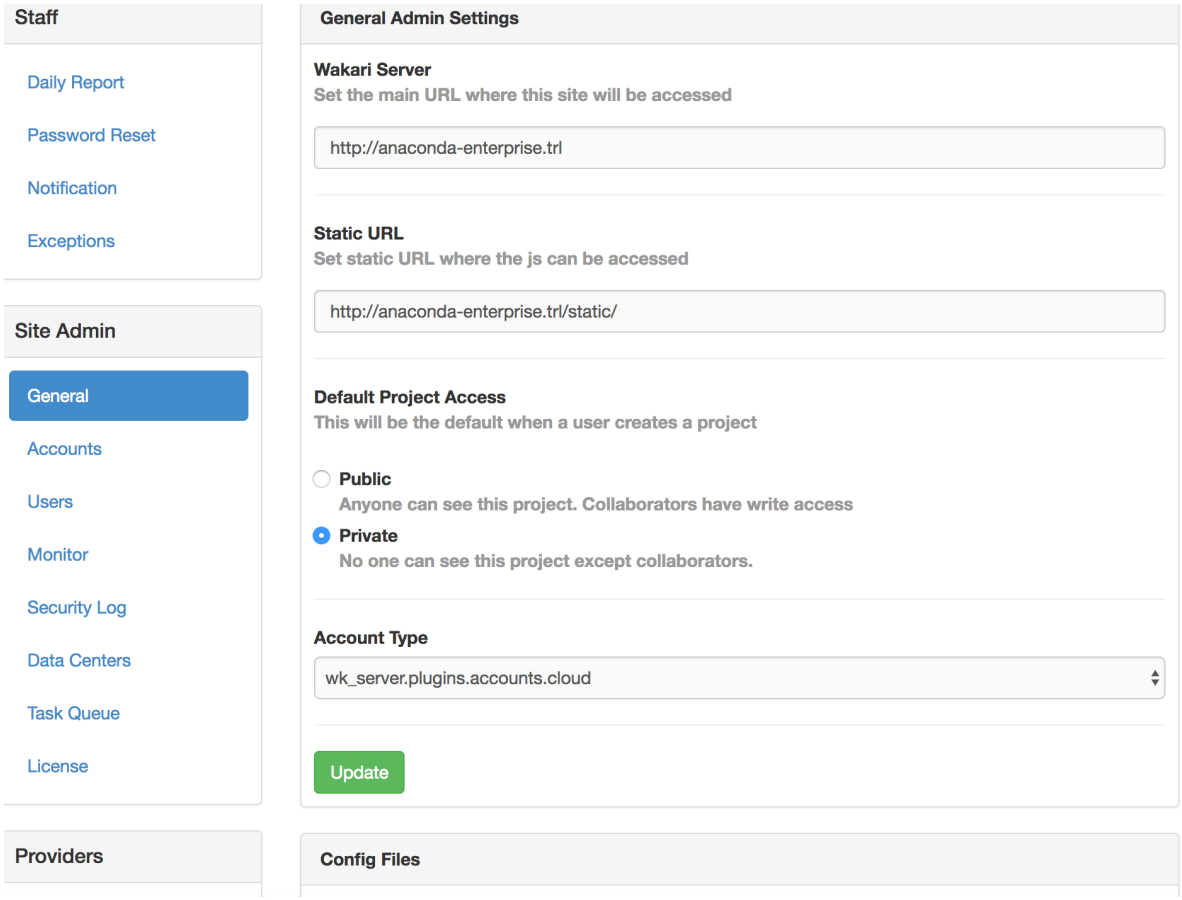
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

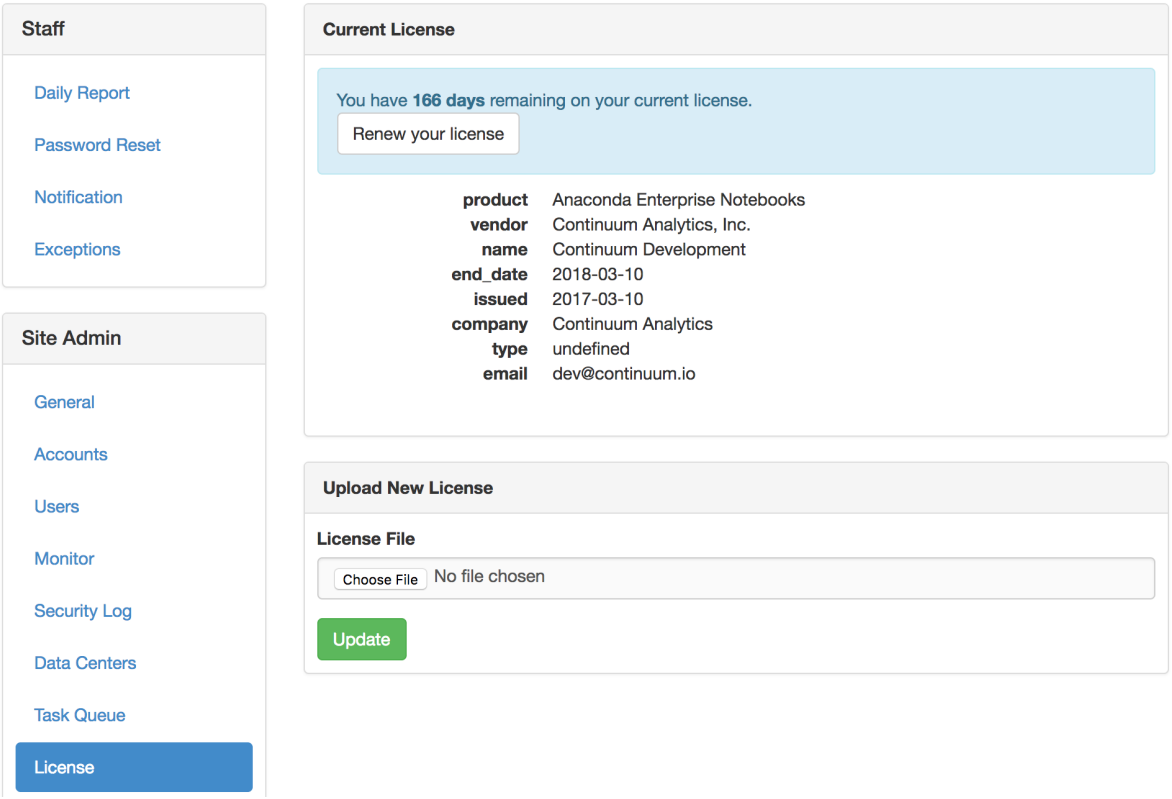
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.

7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.

3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise 4 Notebooks*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the Python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the `AEN_SRVC_ACCT` and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.3.0 October 24, 2018

Administrator-facing changes:

- Fix bug where compute logging wasn't respecting the `logMaxFiles` key
- Log and display a descriptive error message when there is a problem creating the users index
- Log and display a descriptive error message when there is a problem creating a new user with a duplicated e-mail address when the `uniqueEmail` setting is enabled
- Add footer server pages with server host data (IP, AEN version and server version)
- Fix admin script to change the status of private projects
- Fix validation error when updating/editing an existing resource
- Docs: Add KB article about using MongoDB to update old projects with new Data Center information
- Docs: Add restarting service step to SSO documentation
- Docs: Add support for newer versions of MongoDB
- Docs: Add documentation on `uniqueEmail`
- Docs: Add `projDirsAsHome` key to config docs
- Docs: Rewrite the "Using project directories as home directories" section
- Docs: Add full path to admin commands
- Docs: Warn about upgrading away from tested pkgs
- Docs: Add missing steps to "Authenticating with LDAP" section
- Docs: Add troubleshooting documentation about orphaned projects
- Docs: Warn about not using IP address when you connect to AEN
- Docs: Add an entry about 'Error starting projects' in the troubleshooting page
- Docs: Rewrite "Group and user permissions for NFS" section and description of the `identicalGID` key in the config pages
- Docs: Add a new section about using MRO packages in AEN (Update: MRO was discontinued in 2021)

- Docs: Preserve username capitalization when using LDAP/AD
- Docs: Add umask 0022 to security requirements
- Docs: Add new section about changing install location
- Docs: Add note about how to manually break out Root CA for the gateway
- Docs: Add note about upgrading custom environments
- Docs: Add notes about how to find conda config files inside AEN
- Docs: Add note about using `USE_SERVER_BASED_SESSIONS: false` when configuring SSO between AEN and versions 2.33.3 through 2.33.10 of the Repository

User-facing changes:

- Increase Workbench file upload limit
- Fix Bokeh examples
- Extend `nb_locker` to detect a server disconnection and generate an alert if it occurs
- Docs: Update the notebook app to correctly point to AEN docs
- Docs: Emphasize that permissions are not applied recursively in the workbench

Internal fixes:

- Update Nginx version to v1.12.2
- Remove unused server config file during the compute upgrade process
- Remove already defined compute default settings from the post-script step
- Pin widgetsnbextension version to prevent version mismatch issue (ipywidgets)
- Remove `--offline` flag from the conda clone operations
- Support MongoDB 3.4.14 and update pymongo to version 3.2.2
- Fix LDAP username case sensitivity
- Security fixes and enhancements

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs
- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7

- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date
- Server: Fix bug Monitor Report blank
- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected "ca" key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes

- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace 'wakari' wording
- New config option to move the user's home directory into the user's project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user's home directory into the user's project directory
- Package cache was moved from user's home directory into the user's project directory
- Change wakari logos to Anaconda logos
- Fix error for deleting tags to work
- Define shell prompt in `.projectrc` template
- Replace 'wakari' wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile
- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application

- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove “wakari” word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair “Create Account” link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating
- Compute resource: Show full path to log file
- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes
- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation

- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089
- Added support for all-numeric usernames
- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher
- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.

- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes
- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Anaconda Enterprise Notebooks 4

Empower the Data Science Team with cross-collaboration

AEN is a browser-based Python data analysis environment and visualization tool from Anaconda®. AEN is a ready-to-use, powerful, fully-configured data analytics environment all in a secure, governed environment.

AEN allows data science team members to create and share private notebooks, manage access, control notebook revisions, compare and identify differences across notebook versions, search notebooks for keywords and packages, use enhanced collaborative notebook features—including revision control and locking—and to access an on-premises and/or cloud collaborative notebook server.

The current version of AEN is 4.2.2, released March 1st, 2018.

User guide

AEN's browser-based management of private packages, notebooks, and environments allows data science team members to:

- Create, share and manage private notebooks.
- Control notebook revisions.
- Compare and identify differences across notebook versions.
- Search notebooks for keywords and packages.
- Use enhanced collaborative notebook features including revision control and locking.
- Access on-premises and/or cloud-based collaborative notebook servers.
- Utilize multiple language kernels like Python and R language in the same notebook.
- Create new notebook environments on the fly without leaving the notebook or entering commands in a prompt.
- Publish results to business stakeholders as interactive visualizations and presentations.

To quickly get up and running with AEN, see *Getting started*.

Download the *Cheat sheet* for easy reference.

Concepts

Projects

AEN users interact with the system predominantly through projects.

A project is a set of conda environments, Jupyter Notebooks, and other files.

Each project has a project drive that all team members can access. The size of the drive is not limited by AEN. Contact your system administrator if you find you do not have sufficient space.

Each project has a separate project directory on the project drive.

The project directory is a directory for project files and data that is separate from the project owner's and team members' home directories, so that team members can share and have equal access.

The path to your project directory is `/projects/<project_owner>/<project_name>`.

For administrative information about projects, directories, and permissions, see *Projects and permissions*.

Team collaboration

Teams collaborate in AEN using projects. Projects allow a team to easily come together by sharing the resources, applications, and environments that are necessary to collaborate effectively.

The AEN project owner and any team members connected to their project will have access to the same:

- Shared files and home directories.
- Shared Python and R environments.
- Shared nodes and hardware.
- Common applications.
- Web user interface.

For more information, see *Working with projects*.

Access control

AEN access controls allow you to:

- Add and remove project access for new team members.
- Limit the access to specific folders and files to members of your project team.
- Use permissions to extend execute access to team members. By default, all of the team members on a project have read and write access to all project assets.

Access control is performed from each project's Workbench application.

For more information, see *Controlling access to your project*.

Sharing projects

AEN supports both public and private sharing.

A project can be "public," which means that anyone with access to the system can view the project assets.

Any content placed in the `public` folder in a project is publicly accessible using its URL.

A project can be "private," which means that only the project owner and team members can view the project assets.

You can also *limit who can access specific files*.

Sharing Jupyter Notebooks

In addition to general project sharing capabilities, you can also publish Jupyter Notebooks to Anaconda Repository. This automatically versions the notebook and allows you to define who can view the notebook.

Project tags

Tags are used to:

- Group similar or related projects.
- Identify your project so that it is easier to find.
- Let others know about your project.

You can *add and remove tags* for any project that you have access to.

Getting started

This section contains information and tasks for first-time AEN users.

1. Download the AEN cheat sheet

Before you start, download and print the *AEN cheat sheet* for easy reference.

2. Access your user home page

After your administrator has set up your server and new Anaconda account, you will receive a welcome email.

1. Click the link in the email to open the AEN login page.

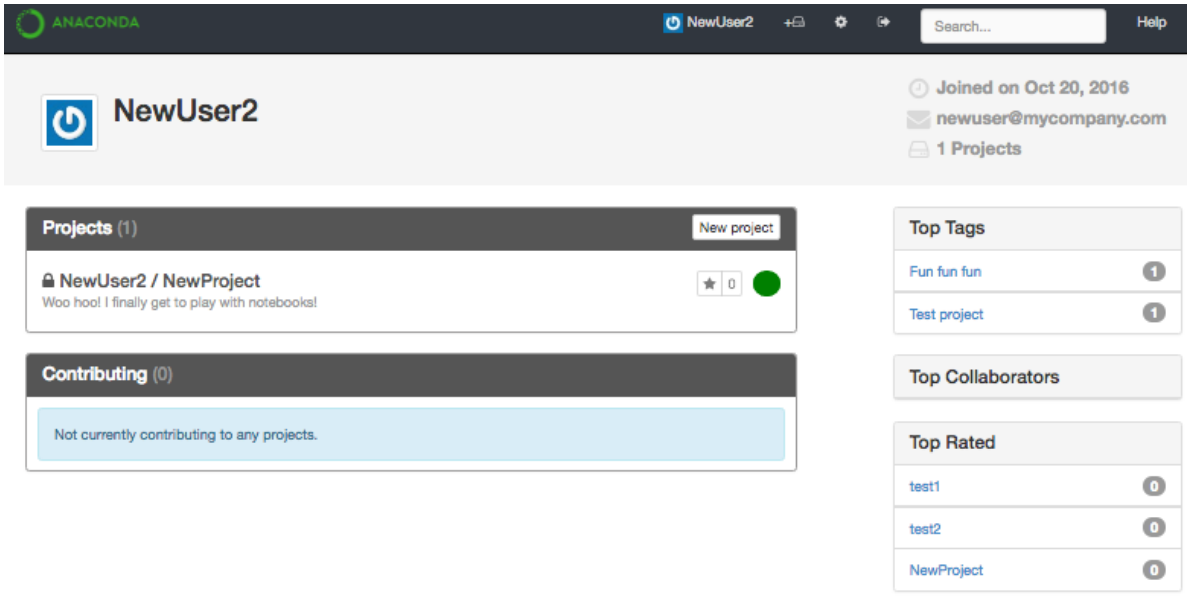
   NOTE: Use the domain name and not the IP address when you connect to AEN. Using the IP address can cause TLS and security certificate errors.

2. Enter your AEN account username and password.

   NOTE: Some administrators allow you to create your own account. If your administrator has allowed this, in the create a new account section, create your own username and password.

3. Click the Login button.

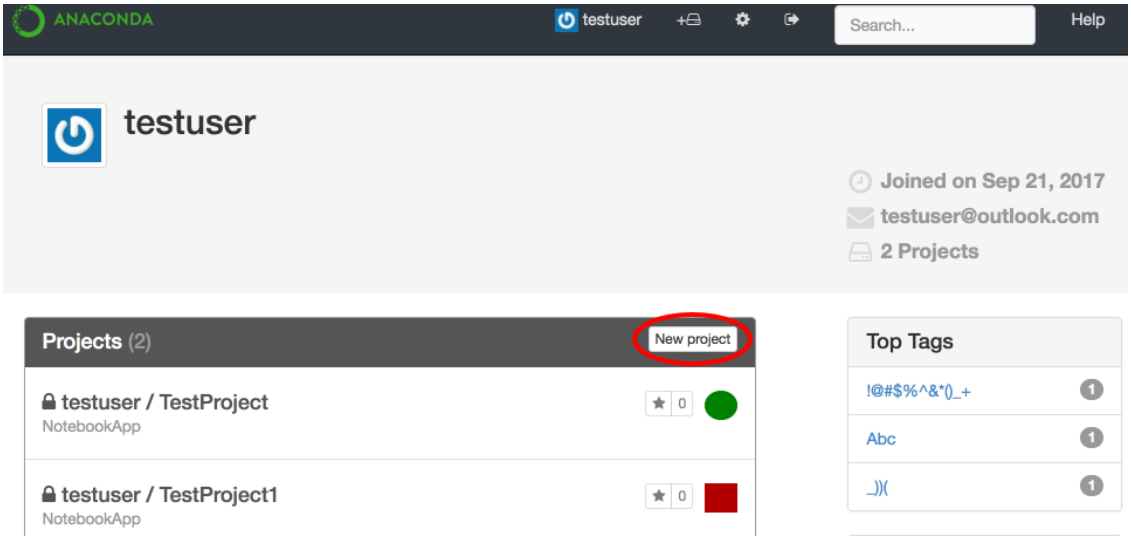
   Your user home page, where all good things happen, is displayed:



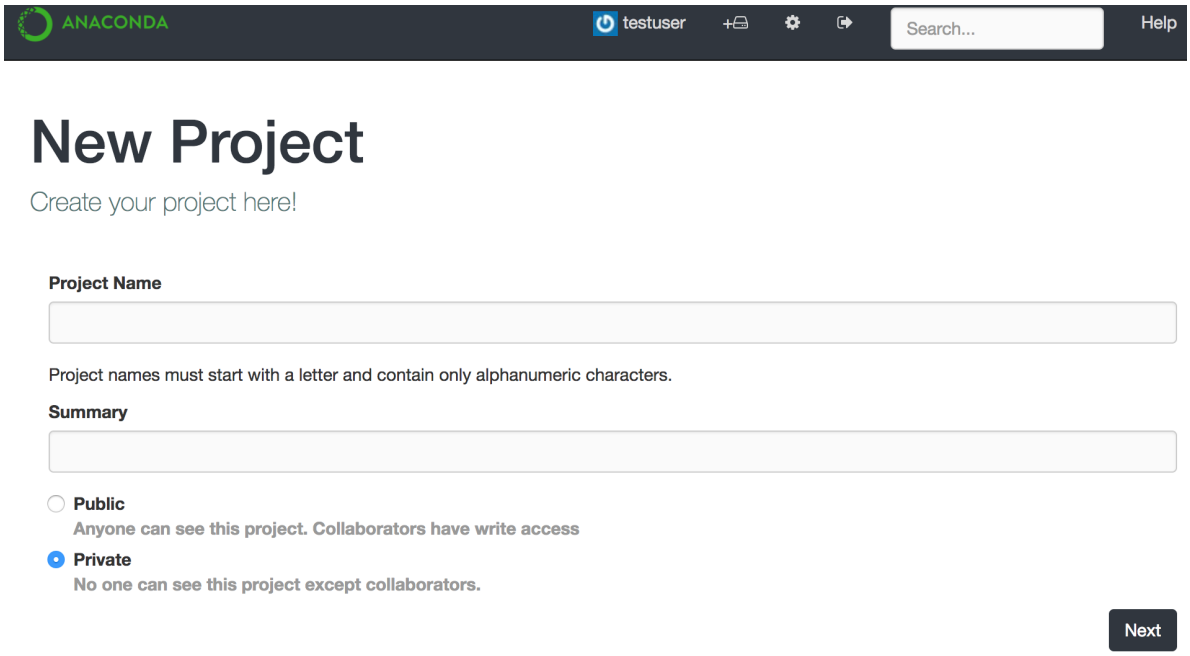
3. Create a new project

1. There are 2 ways to create a new project in AEN:
   - On the right side of the AEN task bar, click on the New Project icon:

   - On your home page, click the New project button:



2. On the Project page that is displayed, type a name for your project, such as "Testing."

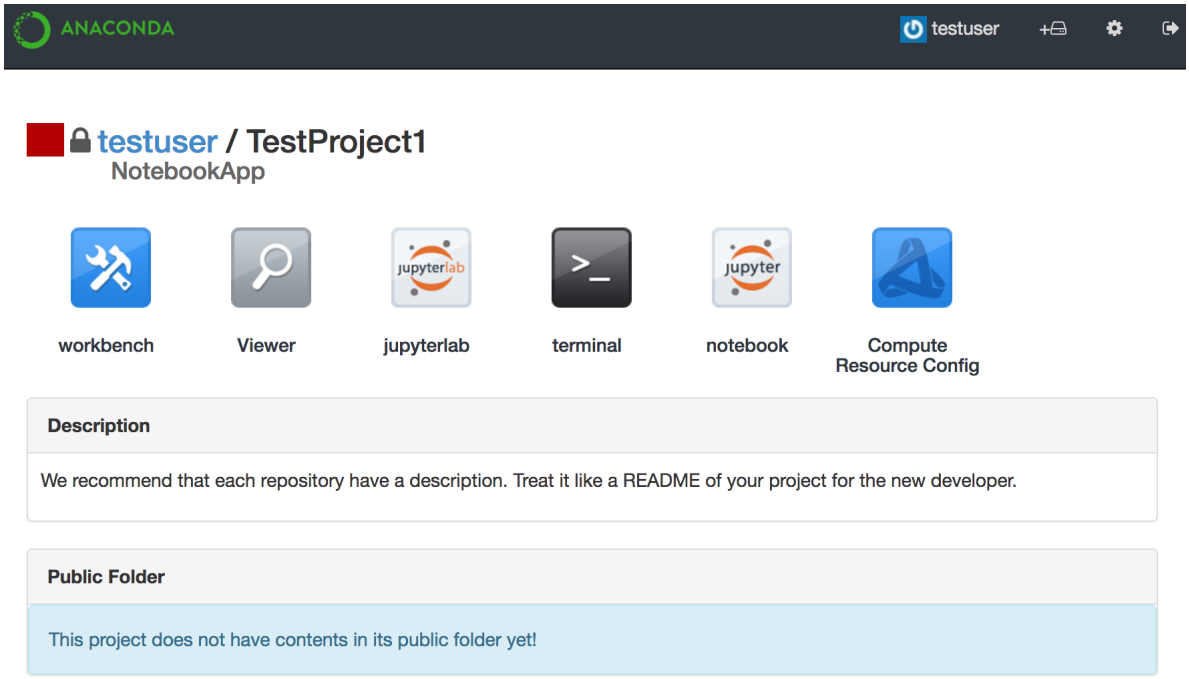


3. Type a summary of the project so you can recognize it later.
4. Select whether your project will be public or private.
5. Verify that the default data center is selected.

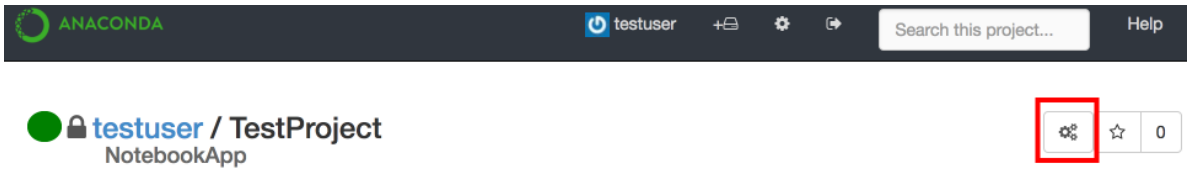
   TIP: You can update the project summary and description at any time from the **Project** menu in the Project Settings. To return to your project at any time, click the project name.

6. Click the Next button.

   Your new project's home page is displayed:



7. To change the project settings, click the Project Settings icon on at the top right.



8. Modify the summary or add a description of the project.

   TIP: A project description is recommended, and may be written in Markdown syntax (plain text valid Markdown).

   To see how Markdown will be displayed, in the description area, click the **Preview** tab.

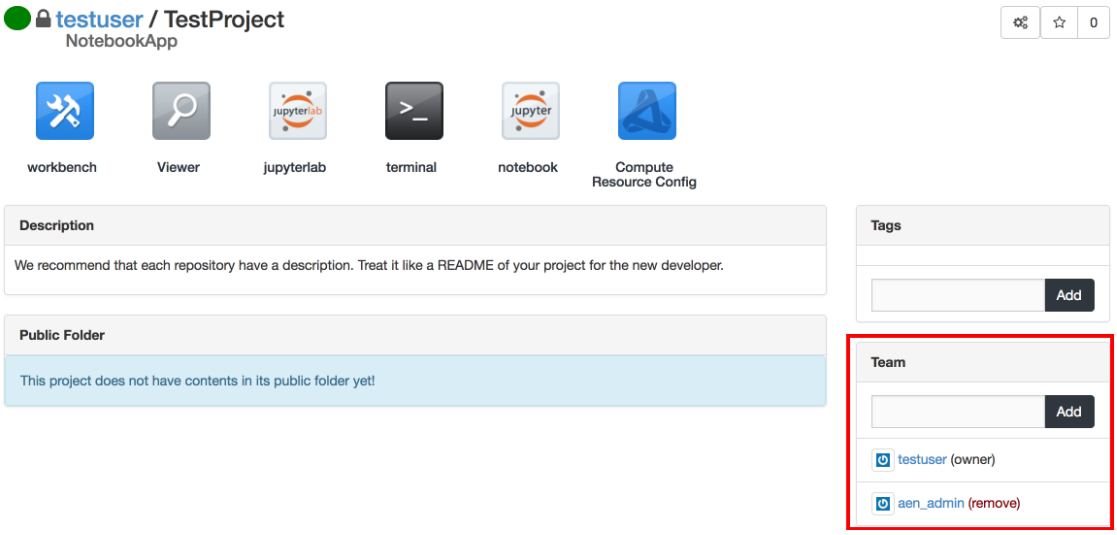
4. Add collaborators

You can add team members to your project as collaborators. Adding team members to your projects makes collaboration easy because they have full access to the project's applications, files and services.

When you add team members, their home directory is mounted in the project. There is no need to download and email data or scripts—team members can work on the same files in the same environment in which you are working.

To add collaborators to your project:

1. From your project home page, in the Team box, begin typing a teammate's username.
2. In the list that is displayed, select the teammate's username.
3. Click the Add button.

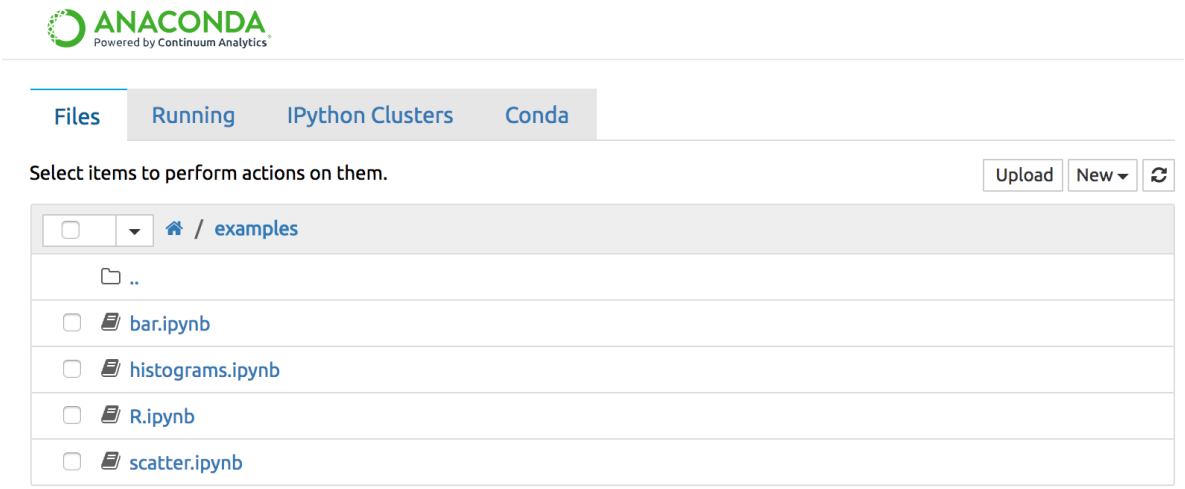


1. Repeat these steps for each team member you want to add as a collaborator.

TIP: You can add or remove team members any time from the **Team** menu in Project Settings. You can also modify a team member's read, write or execute permissions at any time from the *Using Workbench*.

5a. Open an example notebook, OR

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the Examples folder.



3. Select any of the example notebooks.
4. To see the default results of the formulas used in the displayed notebook, in the **Cell** menu, select Run All.
5. To experiment with changing the notebook, edit any of the formulas in the notebook.
6. In the **Cell** menu, select Run All.

Any differences resulting from your edits are displayed.

5b. Create a new environment and notebook

If you are already familiar with creating notebooks, you can easily set up a new environment with the programs you need—like SciPy and NumPy—then open a new notebook and make your edits.

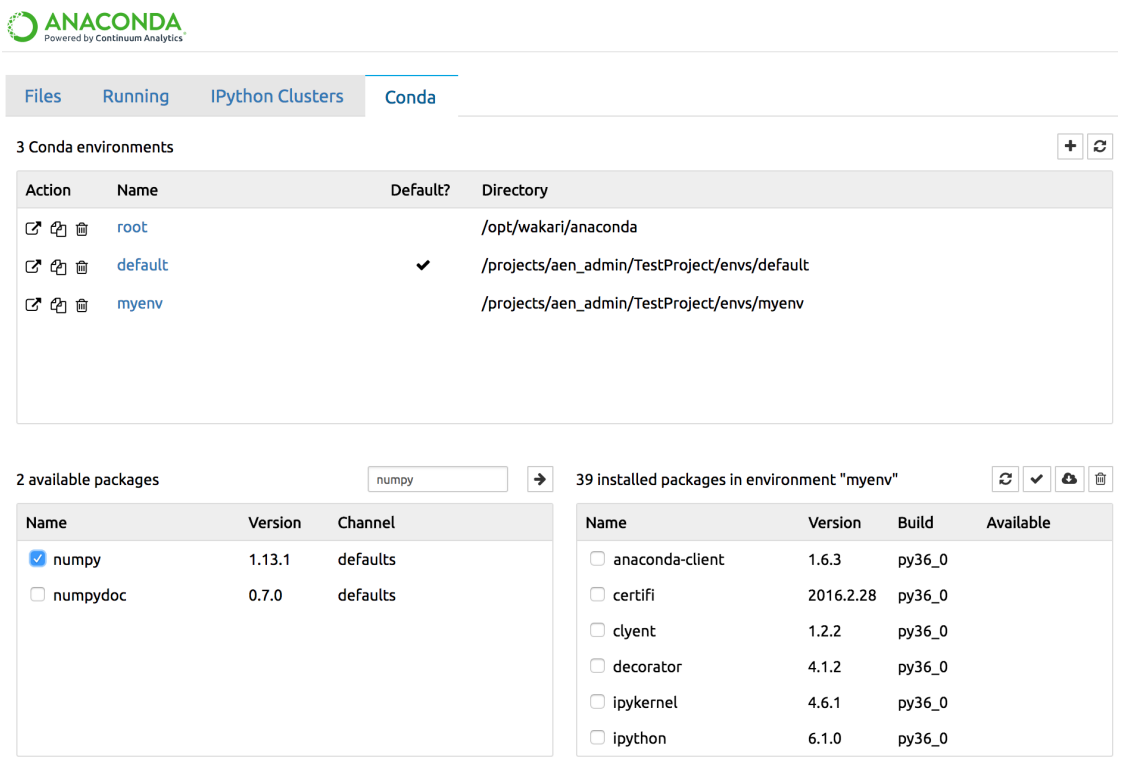
To create a new environment:

1. From your project home page, click the Jupyter Notebooks icon.
2. On the File View page, click the **Conda** tab.
3. To add a new conda environment, on the top right of the **Conda** tab, click the + icon.
4. Type a name for your environment.
5. Select Python 2, Python 3 or R language kernel.
6. Click the Create button.
7. To activate your new environment, click its name.

The packages that are available and installed in your new environment are displayed.

Adding SciPy and Numpy packages

1. In the available packages section, search for the package name `numpy`—all lower case.
2. In the results section, next to numpy, select the checkbox.



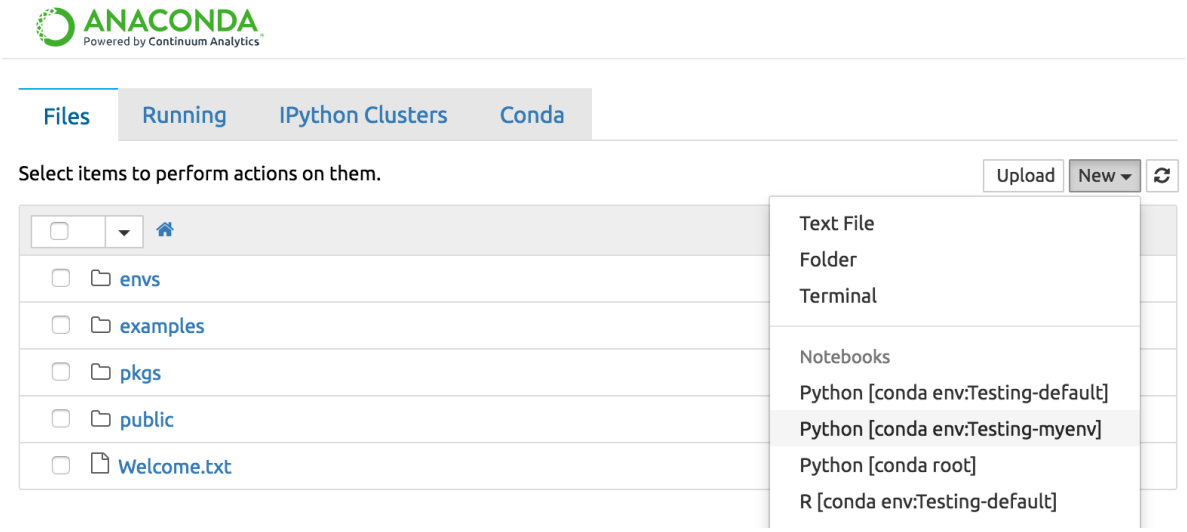
1. Click the Install icon.
2. To confirm your installation, click the Install button.

Numpy is displayed in the installed packages section—if not, click the Refresh button. Repeat these steps to install the Scipy package—searching for `scipy` in step 1.

TIP: You can return to this screen at any time to add additional packages to this environment.

Creating a new notebook in your environment

1. From the AEN homepage, click the **Files** tab.
2. On the top right of the **Files** tab, click the New button.
3. Under Notebooks, select the Python environment with the name you entered while *creating a new environment*.



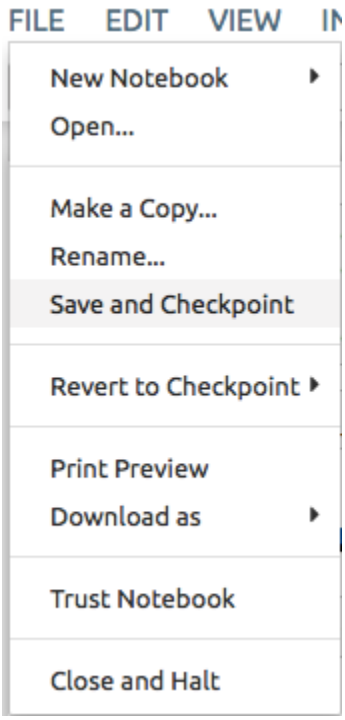
NOTE: If you do not see your new environment listed under Notebooks, next to the New button, click the Refresh button.

A new locked notebook is displayed. Paste or write some code to execute when you are ready.

6. Create checkpoints for version control

Whether you are exploring an existing notebook, or creating a new one, you can easily create checkpoints, return to an earlier version, compare two different versions and save them for reference.

To create a checkpoint, in the **File** menu, select Save and Checkpoint:



To revert your notebook to a previous checkpoint, in the **File** menu, select Revert to Checkpoint.

NOTE: For more information about revision control features, including creating commits and comparing differences, see *Using the Revision Control Mechanism extension*.

7. Share your notebook and environment with others

See *Sharing projects and notebooks*.

8. See what to do next

Now that you have completed the Getting Started guide, you are ready to move on to *basic tasks* and *advanced tasks*.

Basic tasks

This section contains information and tasks that use the web browser to manage projects and is best-suited for any beginning AEN user:

Working with projects

Almost everything in AEN starts by opening an existing project or creating a new one.

After that, you can set up a special environment with the packages you want, set their access permissions and modify your project settings.

Searching for a project or file

To search for projects and files, use the Search box in the AEN navigation bar. The search provides different results depending on which page you search from:

- On a project home page, search results include any files that match your search criteria within the current project.
- On any other AEN page, search results include any files that match your search criteria within all projects.

TIP: Your search results include only files and projects that you can view: public projects, and private projects to which you have a minimum of view access.

Types of files searched

The following types of files are included in search results:

- `.py`—Python source files.
- `.ipynb`—IPython/Jupyter notebooks.
- `.txt`—plain text files.
- `.md`—Markdown files.

Search indexing

Files that are modified while a project is running are automatically re-indexed shortly after the files are modified. If you create or update a large number of files—such as cloning a git repository or copying a directory—search results may take several minutes to update.

Files that are modified while the project is not running are re-indexed only after the project is started.

Using search constructs

You can use the following search constructs:

- Ordinary words will match the full-text contents of any file.
- Wildcards are permitted.

  EXAMPLE: `John*` will match John and Johnny. These are glob patterns and are similar to their usage in the command line.
- Combine queries using `AND` or `OR`, and group them using parentheses `()`.

Regular expression patterns can be embedded in the query string by wrapping them in forward-slashes (`/`):

```
name:/joh?n(ath[oa]n)/
```

The supported regular expression syntax is explained in the Elasticsearch reference.

NOTE: Wildcards apply inside a regular expression. A query string such as `/.*n/` would force the search to visit every term in the index.

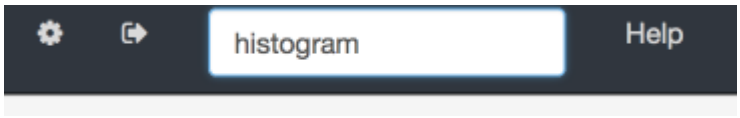
Searching metadata fields

You can search in specific metadata fields:

- `imports:name`—matches files that import the module name.
- `uses:name`—matches files that reference the identifier name. Referenced names include any functions and globals imported from other modules, as well as the names of any methods invoked on any object.
- `defines:name`—matches files that define the identifier name. Defined names include functions defined at global scope, class names, and method names within classes.
- `acl:user`—matches files in which the named user has read access or higher.

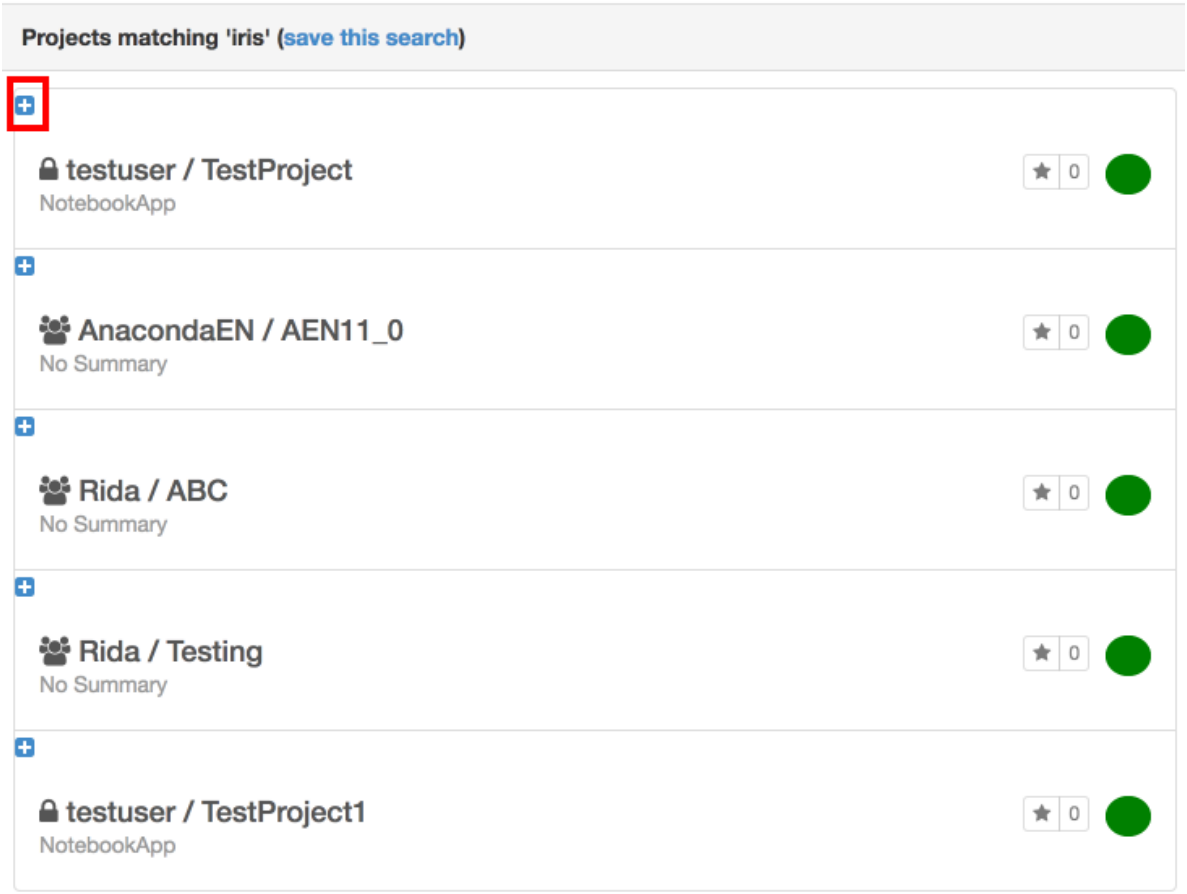
Searching a project

1. In the Search box, type a string of text:

   TIP: Search by glob patterns, which are similar to file matching in the command line.

   EXAMPLE: To find projects in the test family that are numbered from 00 to 99, search for `Test-??`. To find all projects whose name ends with "Stats," search for `*Stats`.
2. Press Enter.
3. In the search results, click the plus + icon above a project name to show a list of matching files in the selected project:

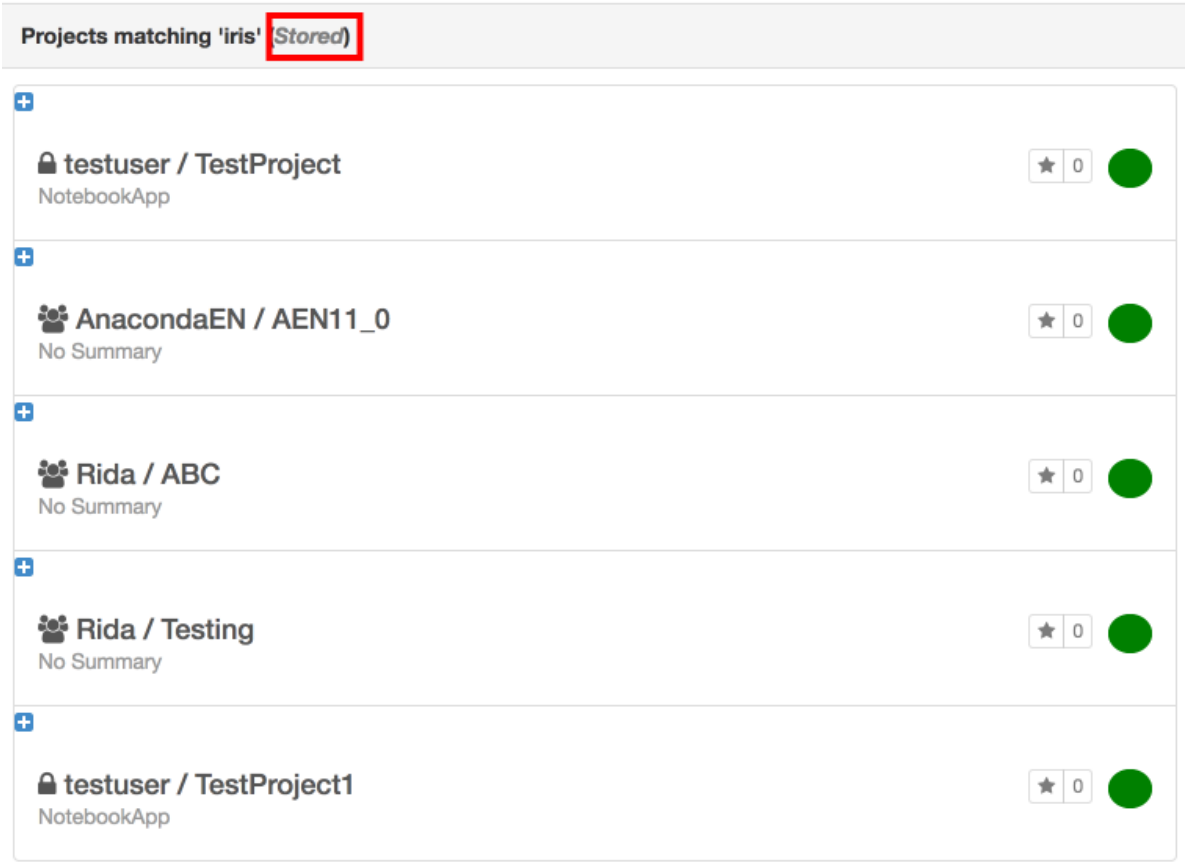


TIP: Click the project name to open the project's home page.

4. To view a file, click its file name in the matching files list:

Saving a search

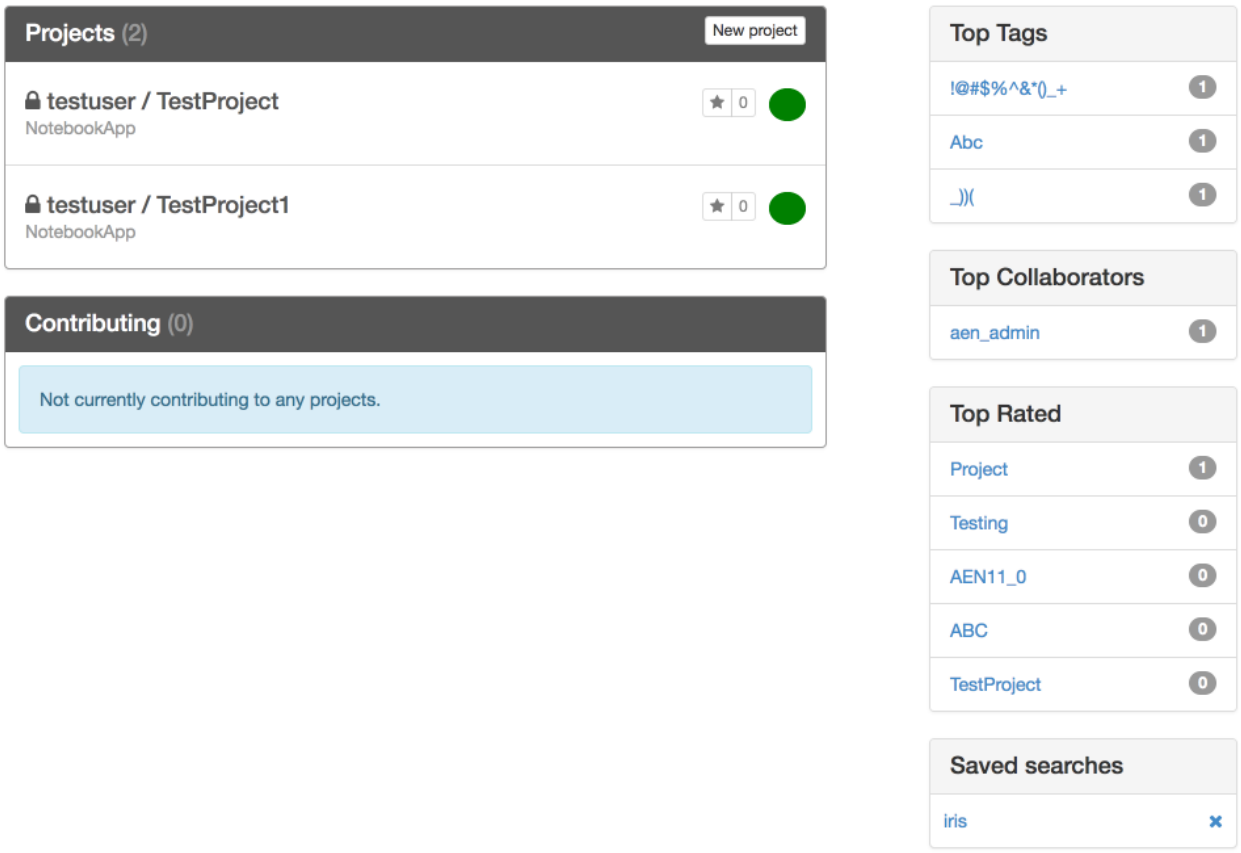
1. At the top of the search results, click Save this search:



The "save this search" text changes to "stored" and your search is saved. Your saved searches are listed on your home page.

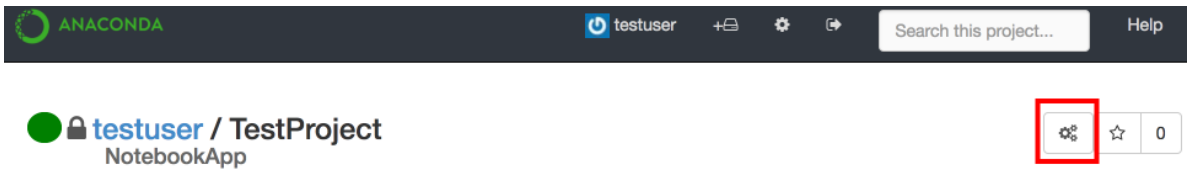
Removing a saved search

On your home page, in the Saved searches section, click X next the saved search that you want to remove:



Adding and removing team members on a project

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Team.

Adding a team member

1. In the username box, type in the first few letters of the username for the team member you want to add to the project.
2. In the list of usernames that displays, click the user to add.
3. Click the Add button.

Removing a team member

Click the red Remove link next to the name of the user you want to remove from the project.

Controlling access to your project

Controlling team member access

By default, all of the team members on a project have read and write access permissions for all project assets.

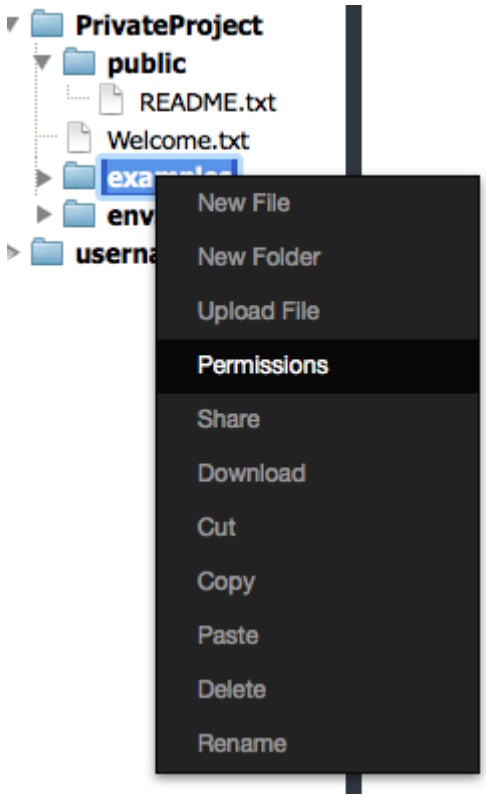
The available permissions are read, write and execute. If you remove all individual or group permissions for a project asset, team members will not be able to access that asset.

To change a project's permissions:

1. Open the project's home page.
2. Click the Workbench icon.
3. In the Workbench app, right-click the file or folder you want to limit access to.

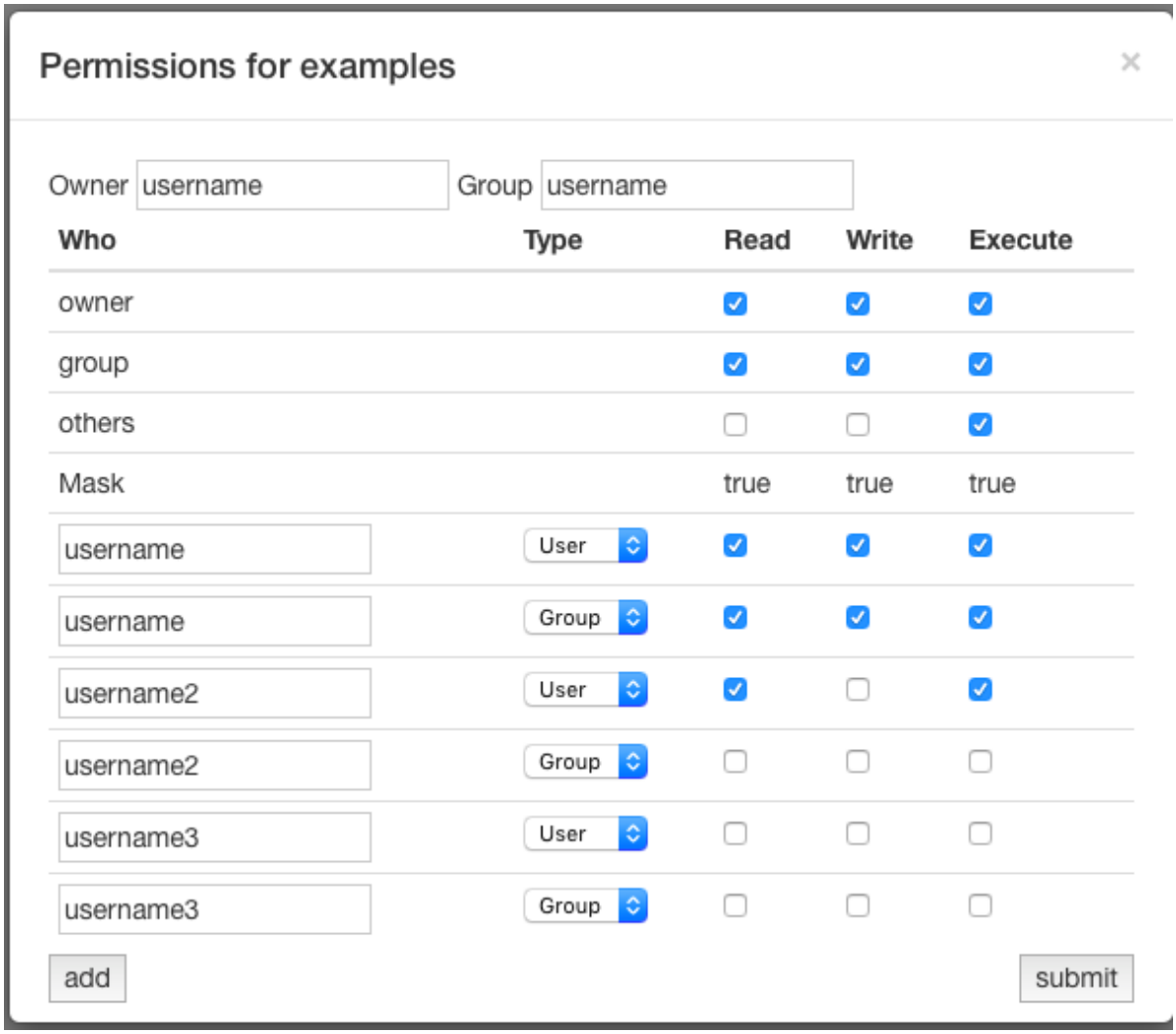
   NOTE: When you change a folder's permissions, the permissions of files and folders inside it do not change. You may change the permissions of those files and folders manually.

4. In the menu that displays, select Permissions:



   A list of owners and team members who have access to your project is displayed.

5. Find the team member you want to change access for:



6. Next to the team member's name, select or deselect the permissions for that user.

   NOTE: You can add a team member and set their access at the same time by typing their name in a username box, setting their permissions, and then clicking the Add button.

7. Click the Submit button.

   The selected permissions are added, and the deselected permissions are removed.

NOTE: If a team member is in the Workbench application when you give them access, they must refresh their browser window to see their current permissions.

Controlling non-team member access

You can choose to grant file or folder access to someone who is not part of the project team, as long as that person has an AEN account.

Sharing with individuals outside the team is a four step process:

1. *Copy or move the file or folder to your home directory*.
2. *Give the user read and execute access to your home directory*.
3. *Add the user to the file's permissions*.

4. *Have the user add your directory to their workbench*.

Copying a file or folder to your home directory

Your home directory is displayed at the bottom of the File Manager pane in the Workbench.

To protect the other files and folders in your home directory—those you are not providing permissions to a user to access—we recommended that you:

1. Create a sub-folder.
2. Rename the folder with the name of the user you are granting access to.
3. Copy or move the file you want to grant permissions for to the renamed folder.

The file is copied or moved to the new location and is ready for you to update the file permissions.

Granting file access

You must select read and execute access for a user to be able to view, but not edit, the files or folders.

1. Right-click the name of the file or folder you are granting access to.
2. In the menu that is displayed, select Permissions.
3. Click the Add button.
4. Type the username of the user to whom you are granting file access and press Enter.

TIP: If you grant access to a folder instead of a specific file, you only have to set permissions the first time you share the folder with each user, unless you need to update the permissions.

Adding file permissions for a user

Once a user is included in your Permissions list, you must *add the correct permissions* for the user, in the same way as you would for a team member.

Once complete, depending on the access granted, the user will be able to view, read, change, and execute the file.

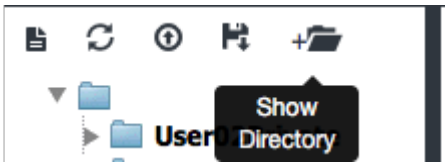
NOTE: If you change permissions for a folder instead of a file, the user will be able to see and access any files within that folder.

Adding a directory to a user's workbench

The user can now add your home directory to their Workbench File Manager.

To add your home directory to another user's workbench, have the other user follow these steps:

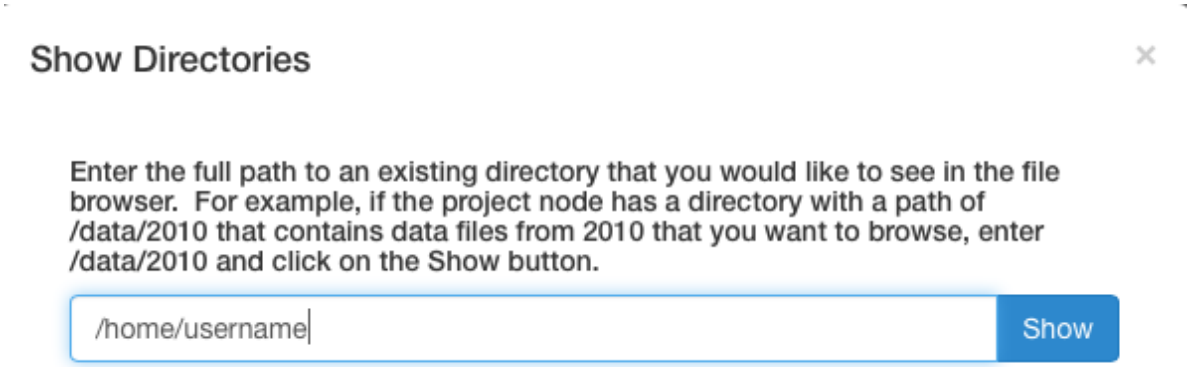
1. Click the Show Directory button at the top of the Workbench File Manager:



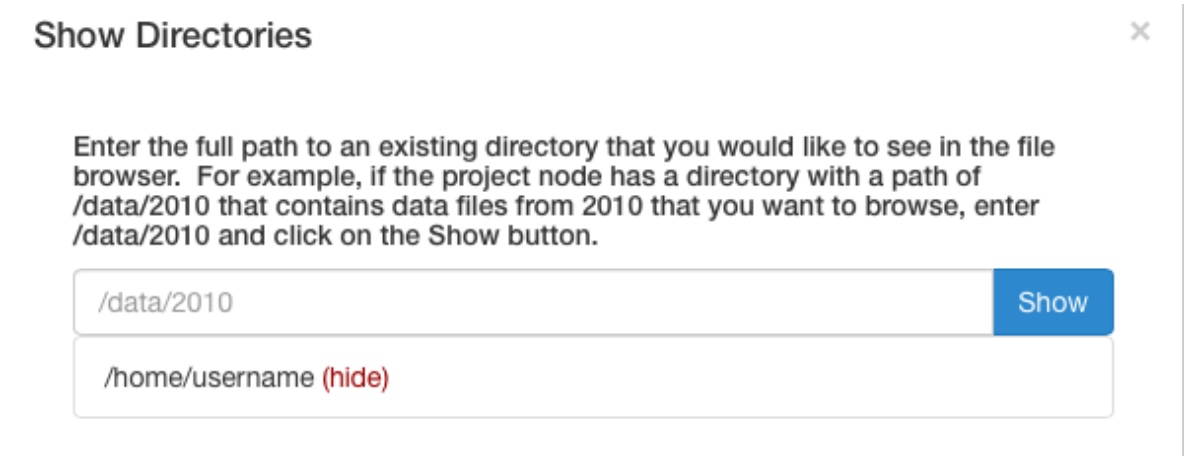
The Show Directories dialog box displays.

2. In the text box, type `/home/[yourusername]`.

   NOTE: Replace `[yourusername]` with your AEN username.

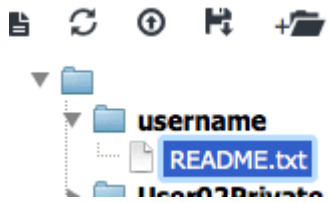


3. Click the Show button.
4. Verify that the folder is now displayed below the text box:



5. Close the Show Directories dialog box by clicking the X in the upper-right corner or by clicking anywhere outside the box.
6. Click the Refresh button.

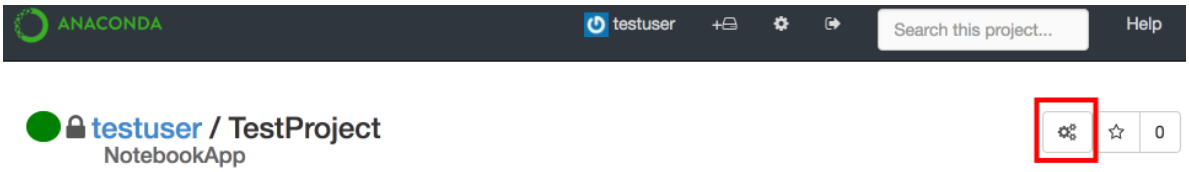
   The shared file is displayed in the File Manager:



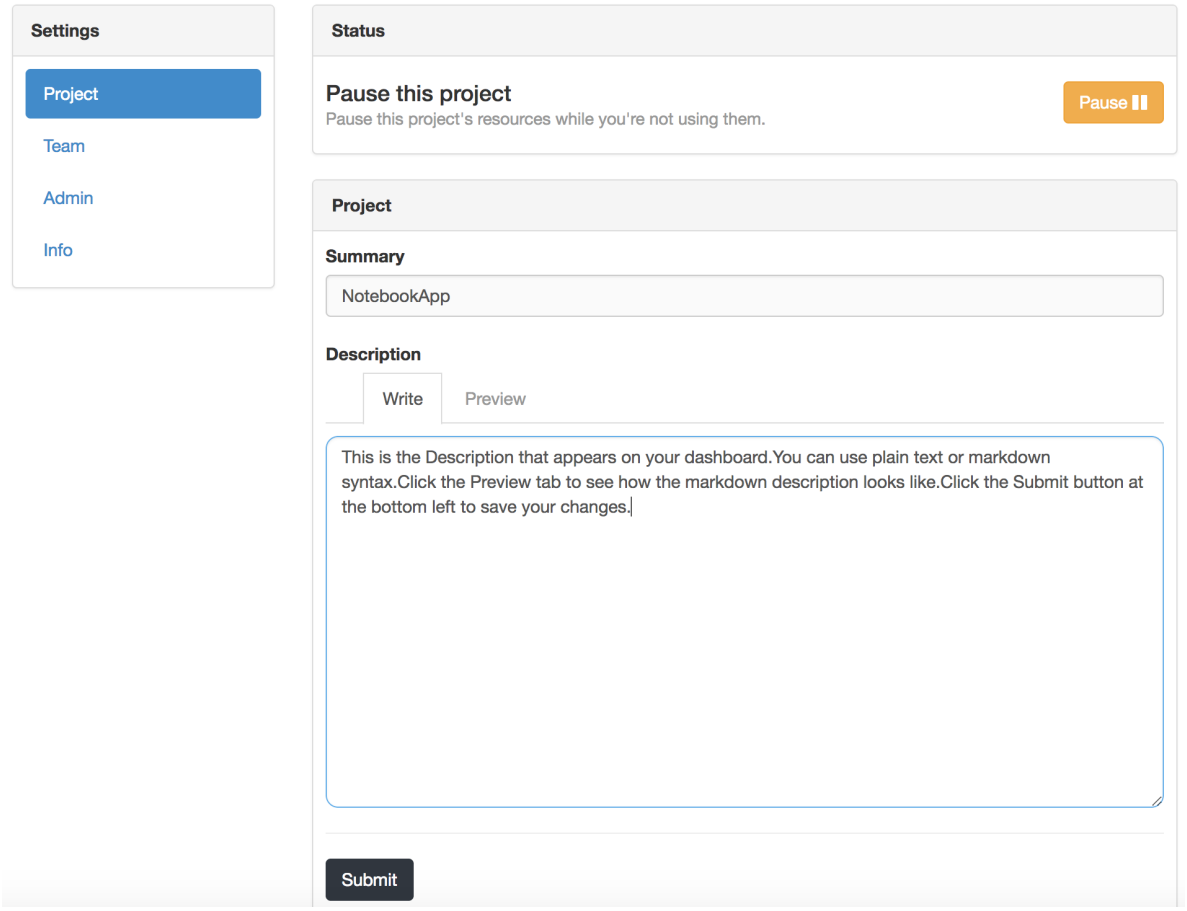
Starting and stopping a project

TIP: Stopping a project stops all the applications launched for that project that use resources when running, such as memory and compute cycles. It is best to stop projects when they are not in use.

1. On the project home page, click the Project Settings icon to open the Project Settings page.



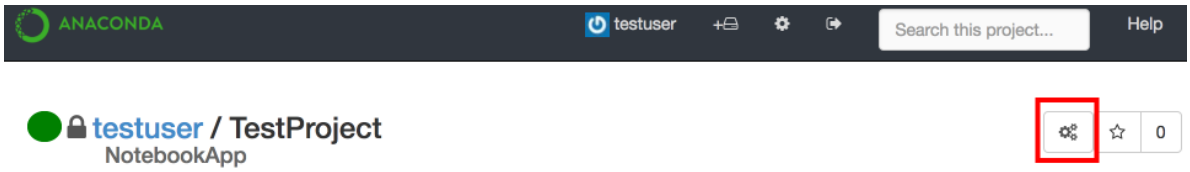
2. In the **Settings** menu, select Project.



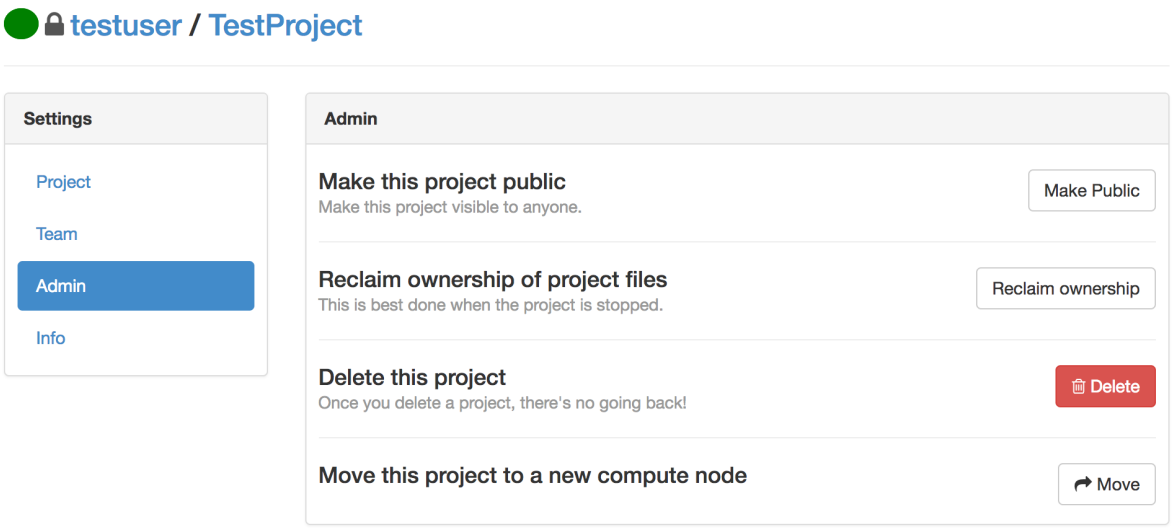
3. In the Status section, click the Start or Stop button to toggle between manually starting and stopping your project.

Making a project public or private

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Admin.



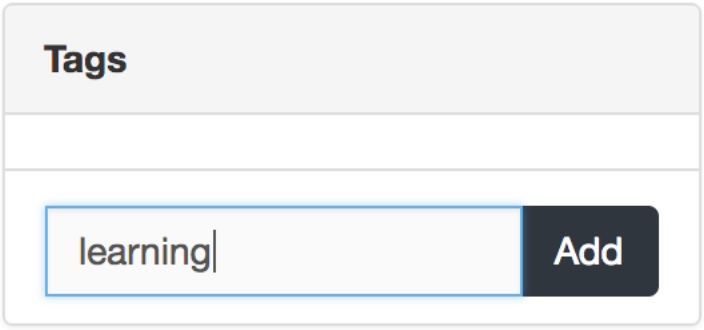
3. Click the Make Public button.
4. If the project is already public and you want to make it private, click the Make Private button.

Tagging a project

Existing tags assigned to a project are listed in the Tags section on the project's home page.

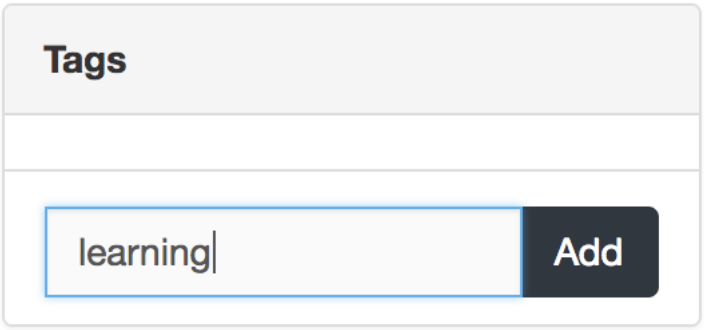
Adding a tag

1. In the Tags box, type the name of the tag you want to add:

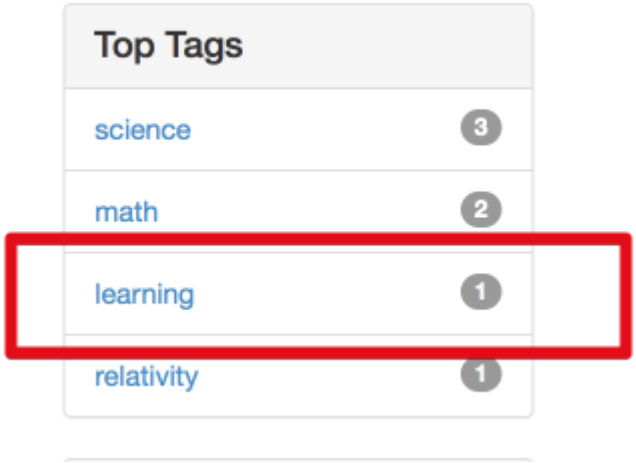


2. Click the Add button.

   The new tag is added to the Tags list:

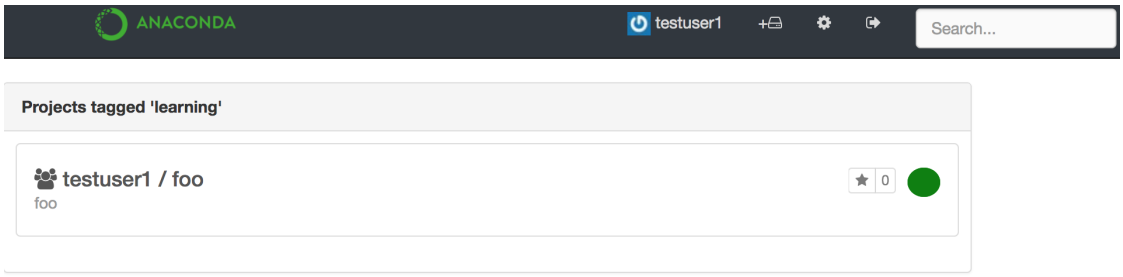


   If the tag was not already in the Top Tags list on your user home page, it is added. If the tag was already listed because another project used it, the number next to the tag is incremented:



Removing a tag

1. On your user home page, in the Top Tags list, click the tag name.



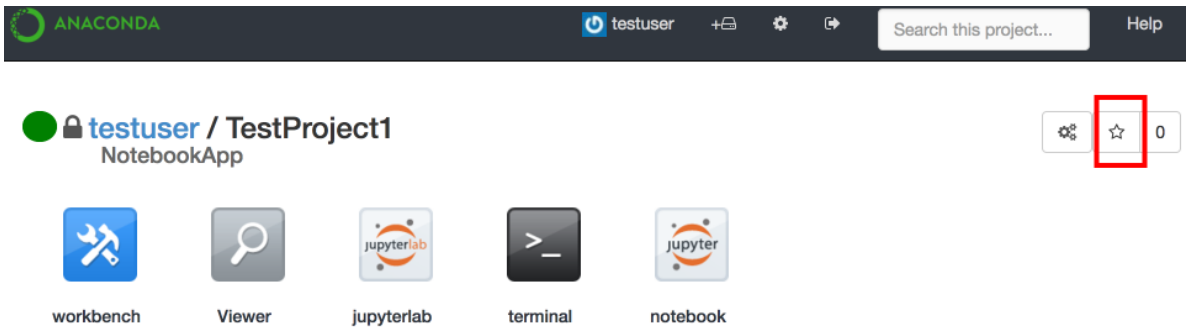
1. In the Tags list, click the X button next to tag name.

Starring a project (rating)

Starring a project makes it appear on your user home page in the Top Rated list.

Adding or removing stars for a project does not affect the stars added by other users.

1. Open the project that you want to star.
2. On the project home page, click the Star icon at the upper right:

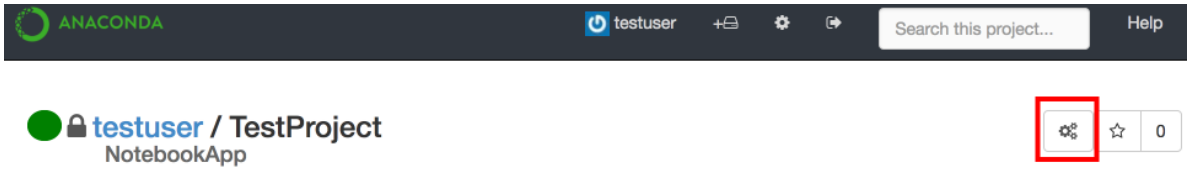


3. To unstar a project, click the Star icon again.

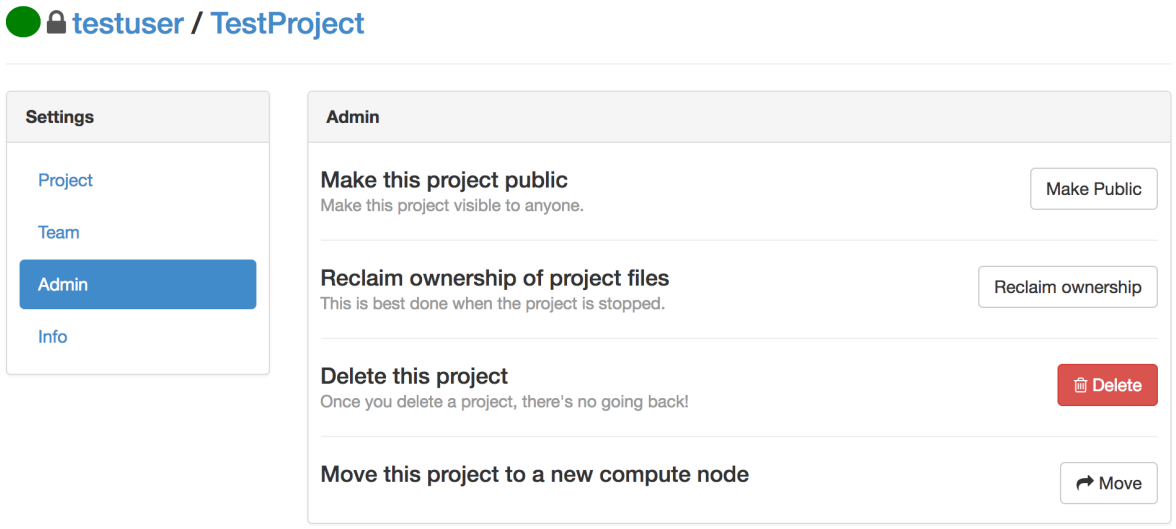
Claim ownership of a project

When you claim ownership of a project, ownership of all files and folders created by the team members on the project is transferred to you. Project files and folders are copied and renamed.

1. *Stop the project* to prevent team members from making changes while you are changing ownership.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



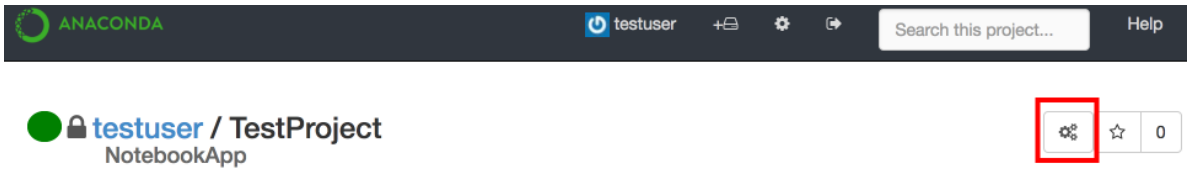
3. In the **Settings** menu, select Admin.



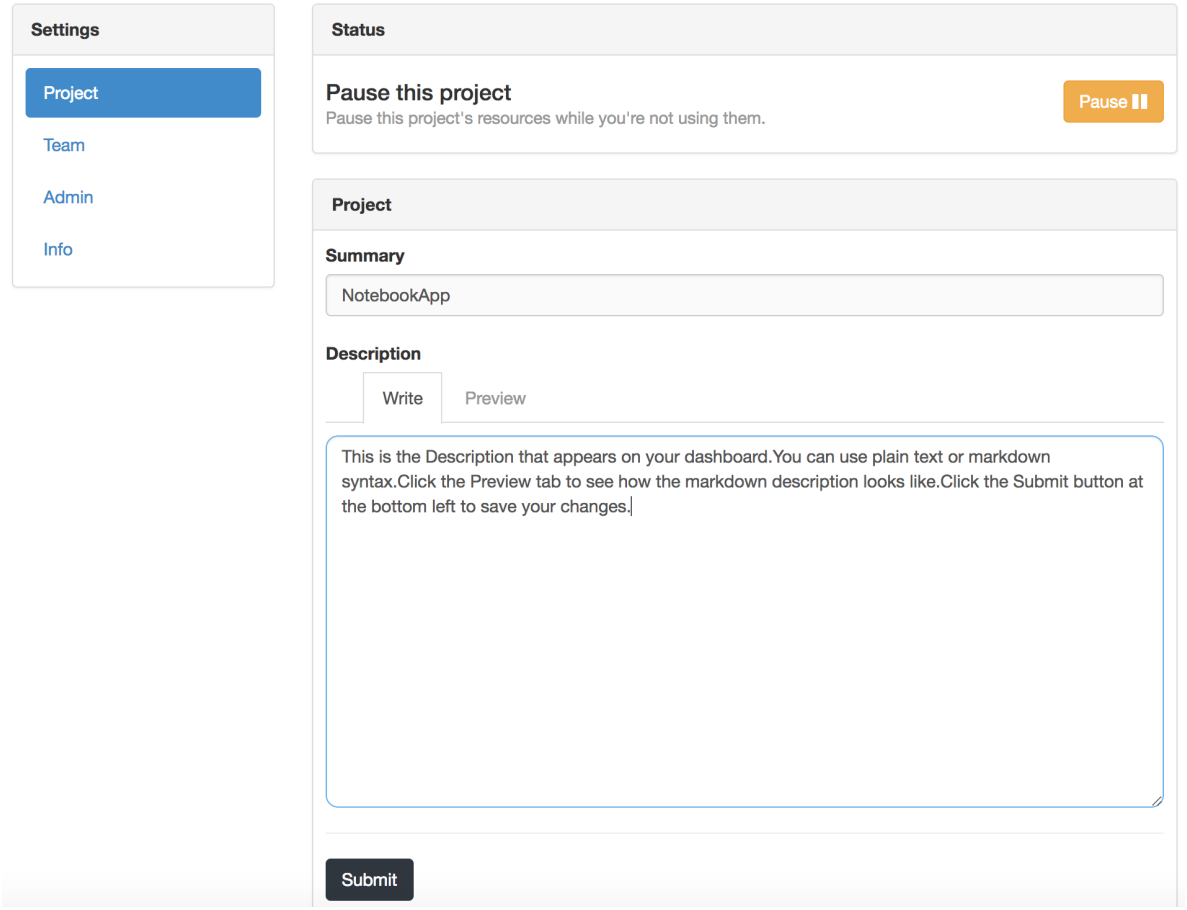
4. Click the Reclaim ownership button.

Changing a project's summary or description

1. On the project home page, click the Project Settings icon to open the Project Settings page.



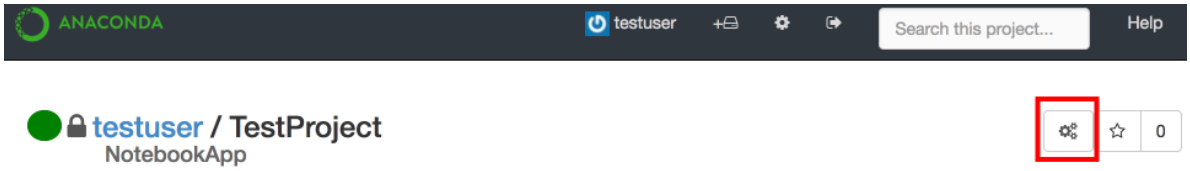
2. In the **Settings** menu, select Project.



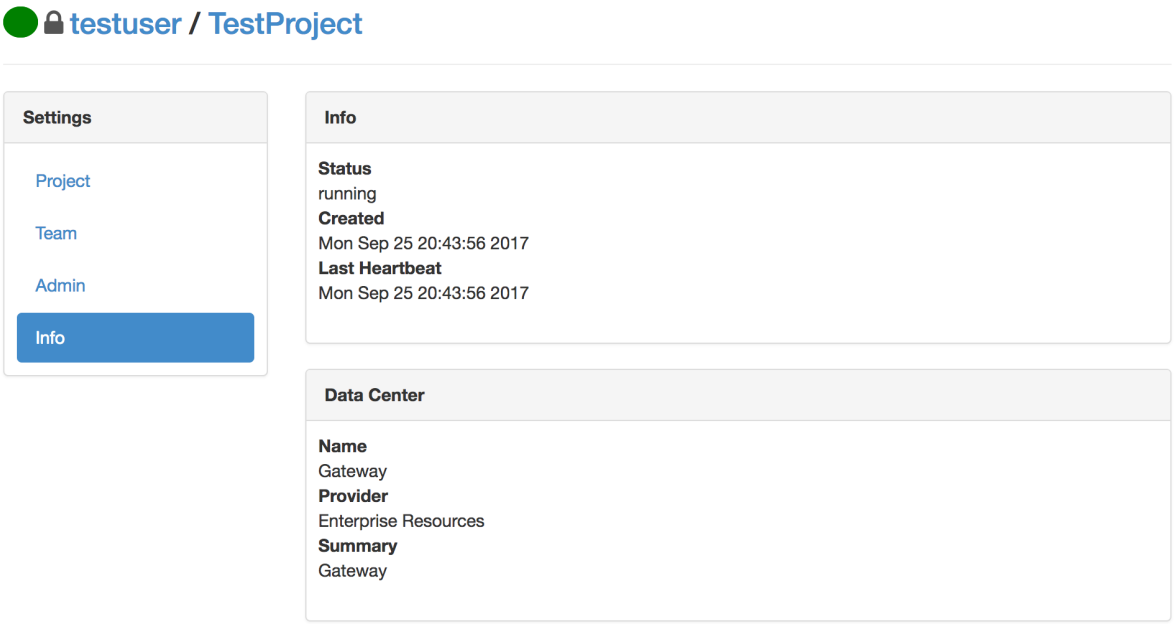
3. Update your project's summary using plain text or its description using Markdown syntax.
4. Click the **Preview** tab to see a preview of the Markdown description.
5. Click the Submit button.

Viewing a project's status

1. On the project home page, click the Project Settings icon to open the Project Settings page.



2. In the **Settings** menu, select Info.

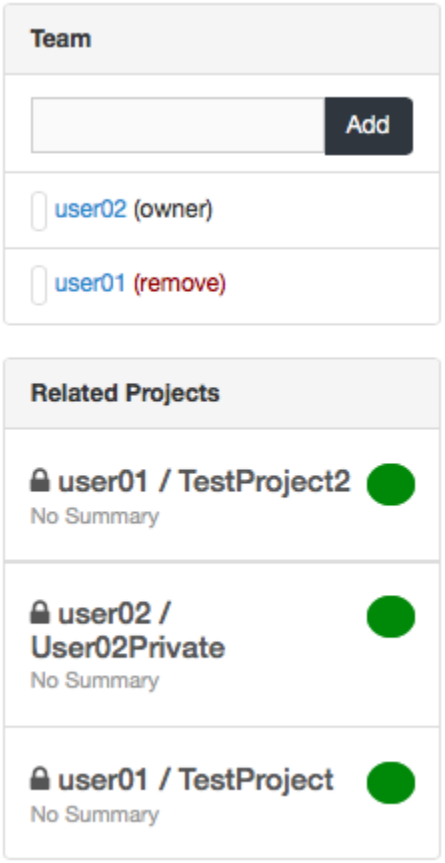


On the Info page, you can see:

- Whether the project is currently running or stopped.
- When the project was created.
- When the project was last accessed.
- The data center in which the project is running.

Viewing related projects

Related projects are listed on a project's home page.



These are projects that contain fields that are most similar to the current project.

TIP: You will only see projects to which you have been granted access: public projects, and private projects on which you are a team member.

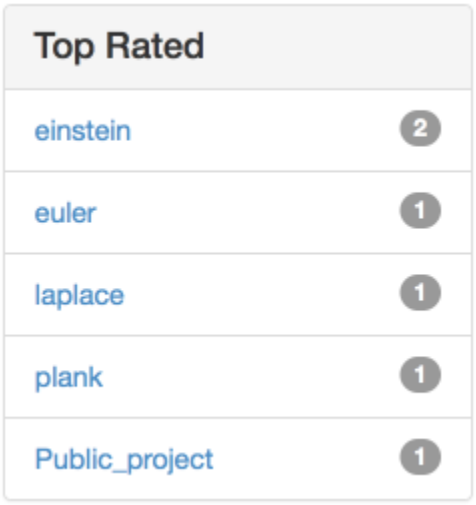
How related projects are identified

To determine which projects should be listed in Related Projects:

1. The recommendation engine scans the current project's files and weights the terms found to determine which of them to use for the likeness search.
2. The engine performs a search, with extra weight given to the "uses" and "imports" keywords.
3. The engine finds the files and projects that are most similar to the current project and scores the results.
4. The top-scoring matches are displayed in Related Projects. Only public projects and private projects to which you have access are included.

Viewing top-rated projects

Top-rated projects are listed on your home page:

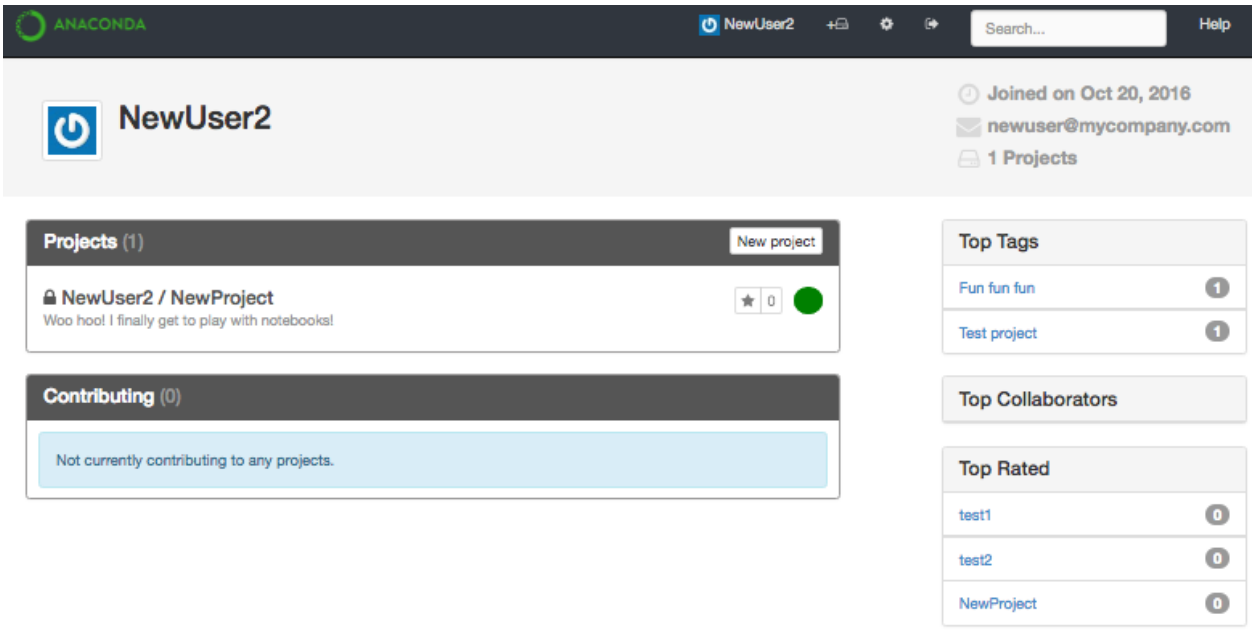


The number next to a project represents the number of stars that have been given to that project.

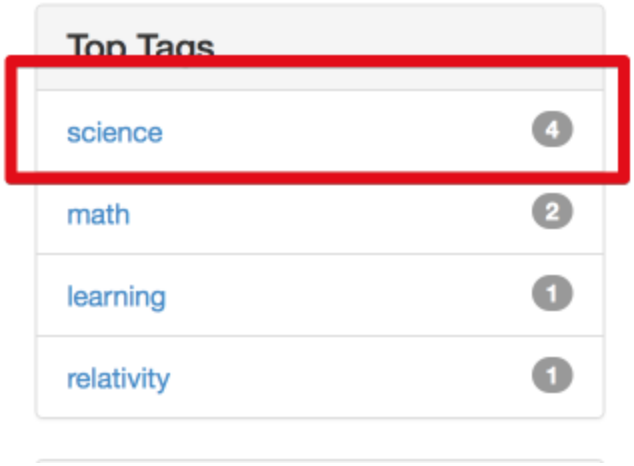
Click a project name to view the project's home page.

Using tags to find a project

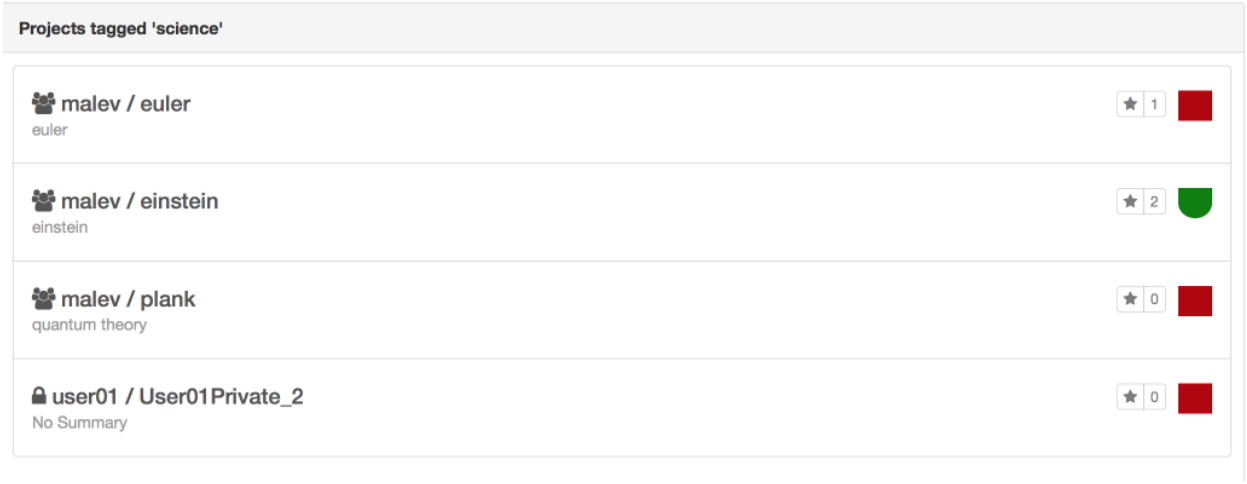
The top tags used on your projects are listed on your home page:



To list all projects that share a specific tag, click the tag name:



A list of projects with the selected tag is displayed:

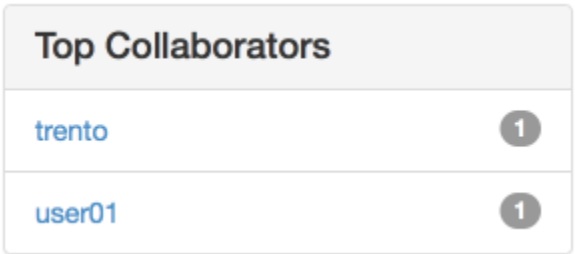


TIP: The list includes only projects that you have access to: public projects, and private projects on which you are a team member.

Click a project name to open the project's home page.

Viewing your top collaborators

Your top collaborators are listed on your home page:



These are the team members who have the most projects in common with you.

To view a collaborator's home page—where you can see all public projects and the private projects they have shared with you—click the collaborator's name.

Sharing projects and notebooks

For information on sharing projects via the project settings and access control, see *Sharing projects*.

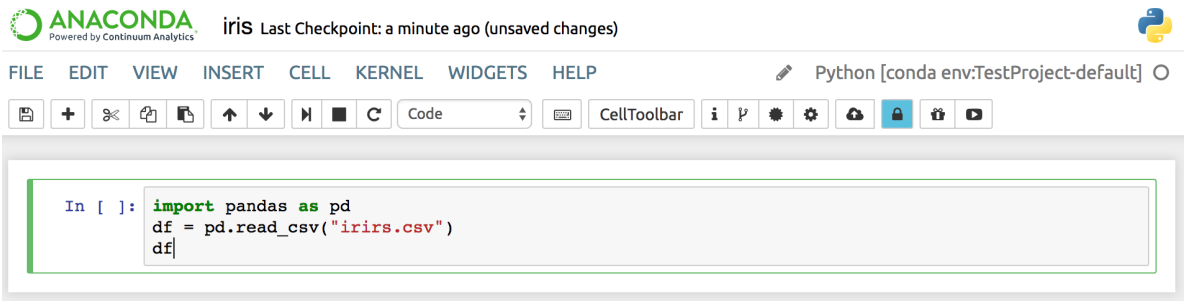
To upload a Jupyter Notebook to Anaconda Repository:

1. Log in to Repository by running the `anaconda login` command or by using the login user interface provided by the *nbextension*.

   CAUTION: If you are not using a secure connection, we strongly recommended that you use the command line to log in.

2. To share your notebook environment, select the Attach conda environment checkbox. This ensures that your team members will have the right environment for your notebook.

3. Click the Upload button to upload your notebook to your local Repository or to Anaconda.org, depending on how your administrator has set up AEN:



   NOTE: If you have not yet logged into Repository or Anaconda Cloud, or have not created an account, you will be asked to do so.

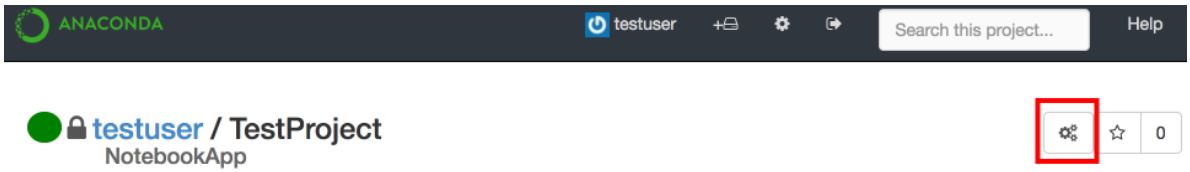
Other ways to share a notebook

- Print—In the **File** menu, select Print.
- Download and share—In the **File** menu, select one of the following options:
  - Download as Notebook.
  - Download as Python.
  - Download as HTML.
  - Download as Markdown.
  - Download as ReStructured Text.
  - Download as PDF.
- Share and control team members' direct access to read, write and/or execute your notebook file or folder. For more information, see *Controlling access to your project*.
- Share and control non-team members' file or folder access. For more information, see *Controlling access to your project*.
- Create a presentation with *NBPresent 4.1*.

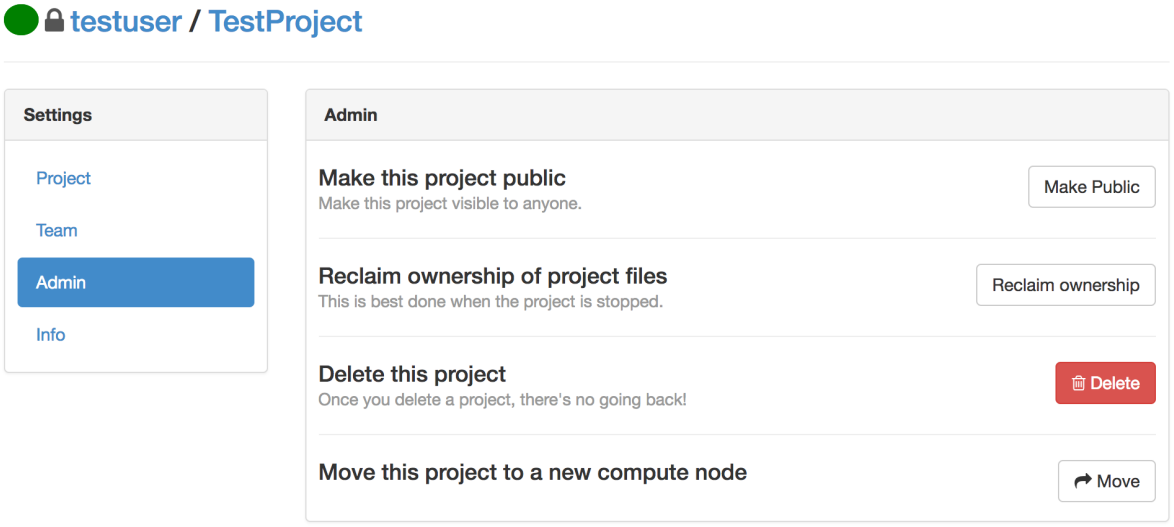
Deleting a project

CAUTION: Deleting a project deletes all project files and information! There is no undo option.

1. Download a copy of any project files that you need to save.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



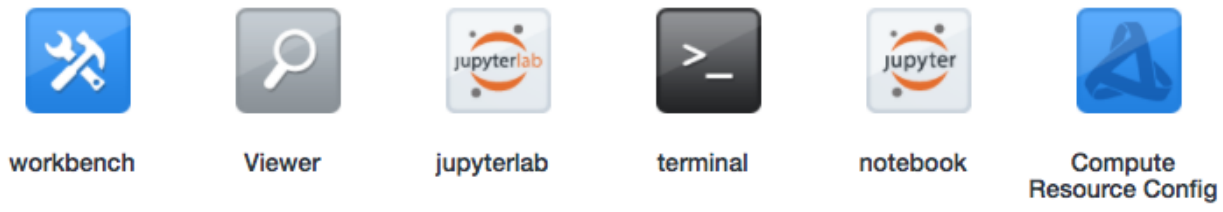
4. Click the Delete button.

Using AEN applications

The applications in your project make it easy for you to interact with your files and data, manage your project's resources and to customize your AEN experience.

To use applications, log in to AEN, then select the project you want to work on or create a new project and open it.

On the project home page, the following application icons are displayed:



TIP: Each application opens in a new browser tab. You can run multiple applications at the same time in your project.

For more information on each AEN application, see:

- *Using Workbench*—File viewer and manager, including permissions settings.

- *Using Viewer*—View-only versions of notebooks and other text files.
- *Using JupyterLab*—Alpha preview of the next generation notebook.
- *Using Terminal*—Basic bash shell Terminal.
- *Using Jupyter Notebook*—Jupyter Notebooks with extensions.
- *Using Compute Resource Configuration*—Project information, view and manage applications.

Using Workbench

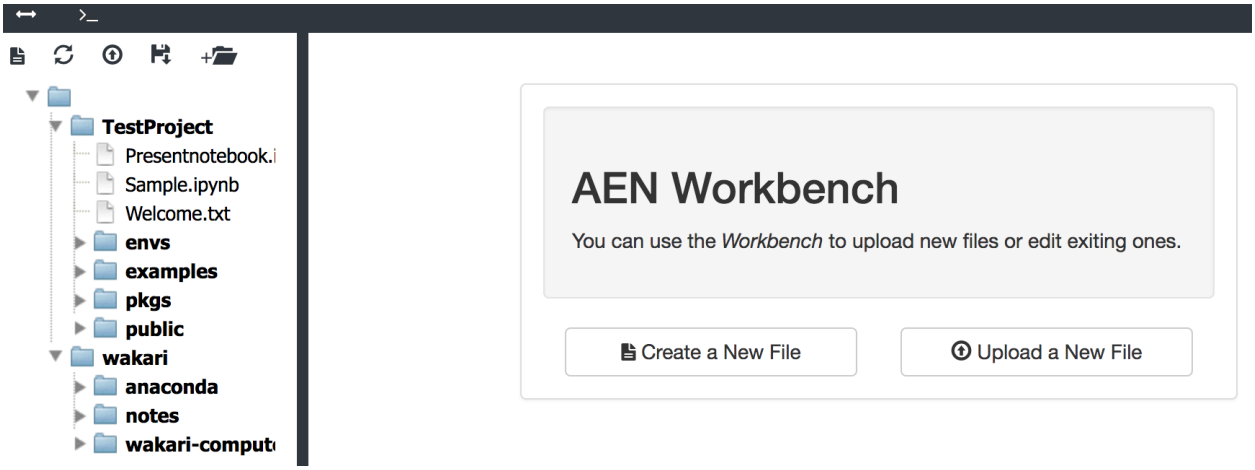
Workbench is a file viewer and manager that includes a file editor and file permissions manager.

You can use Workbench to:

- Upload and download files using the *File Manager*.
- Create new files and folders using the *File Manager*.
- Copy and move files to new locations using the *File Manager*.
- Rename files and/or folders using the *File Manager*.
- Manage the *access permissions* of team members.
- Grant or revoke *access to non-team members*.

Workbench also includes a simple Terminal application, which is convenient because the File Manager is always visible, making navigation simple.

When you first open Workbench, the File Manager is displayed in the left pane, and the Create a New File and Upload a New File buttons are in the right pane:



When you open a file or Workbench Terminal, it is displayed in the right pane. To make the Create or Upload a file options re-appear, refresh your browser window.

Two small icons are displayed in the black navigation bar at the top of the Workbench page. Hovering over them displays tool tips that describe their use:

- The Toggle icon displays or hides the File Manager.
- The Terminal icon opens a simple terminal window.

Opening Workbench

To open Workbench:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Workbench icon:

Workbench opens in a new browser window.

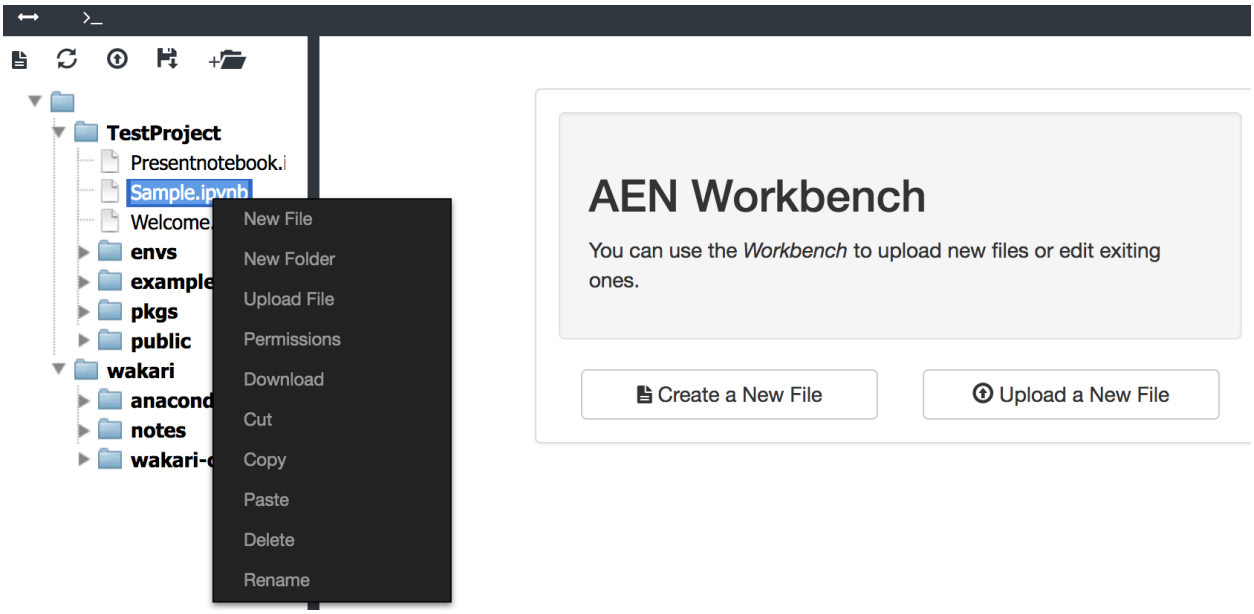
Using File Manager

The File Manager is an intuitive way to interact with your files and folders.

Using the options drop-down menu

To perform any of the actions described below:

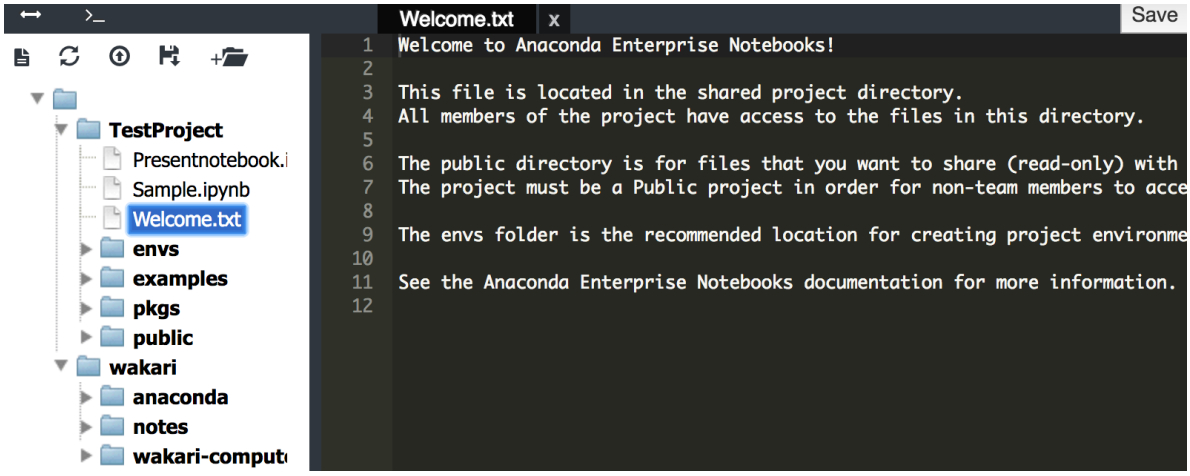
1. Right-click on any folder to display the options drop-down menu.
2. Select one of the following options:
    - New File—Create and edit a new file.
    - New Folder—Create a new folder.
    - Upload File—Upload a file to the selected folder. You can also drag a file to the folder.
    - Permissions—*Control access to files and folders*.
    - Cut—Cut the selected file or folder.
    - Copy—Copy the selected file or folder.
    - Paste—Paste a previously cut or copied file or folder.
    - Delete—Delete the highlighted file or folder.
    - Rename—Rename the highlighted file or folder.



Editing files using the File Editor

1. Double-click any text file in the File Manager.

   The File Editor opens in the right pane:

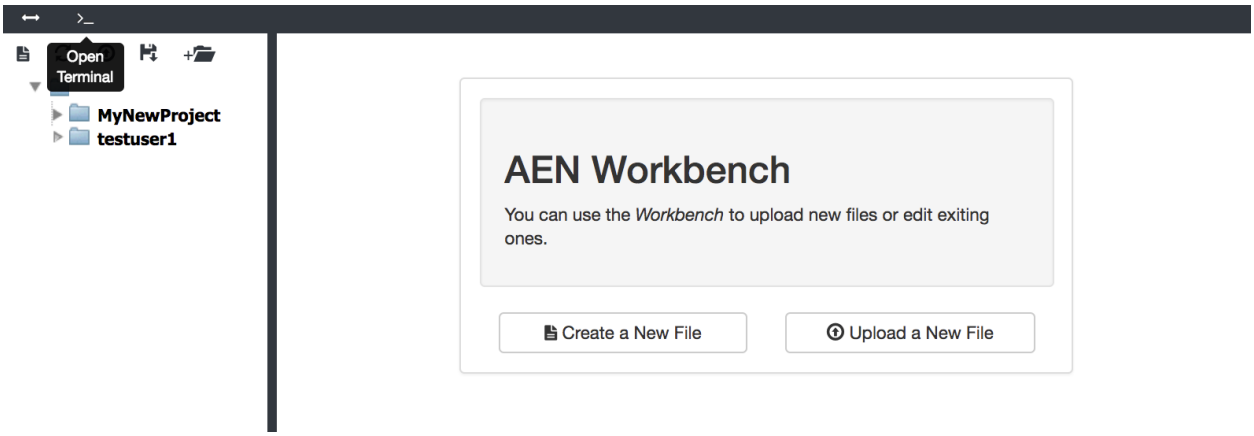


2. When you finish editing the file, click the Save button.

   NOTE: To close the file without saving, click the X at the top of the page under the file name.

Opening the Workbench terminal

In the navigation bar, click the Open terminal icon:



A Terminal—bash shell—is displayed in the right pane.

TIP: You can open additional terminals by clicking the Open terminal icon again, or by clicking the Plus + icon at the top of an open terminal.

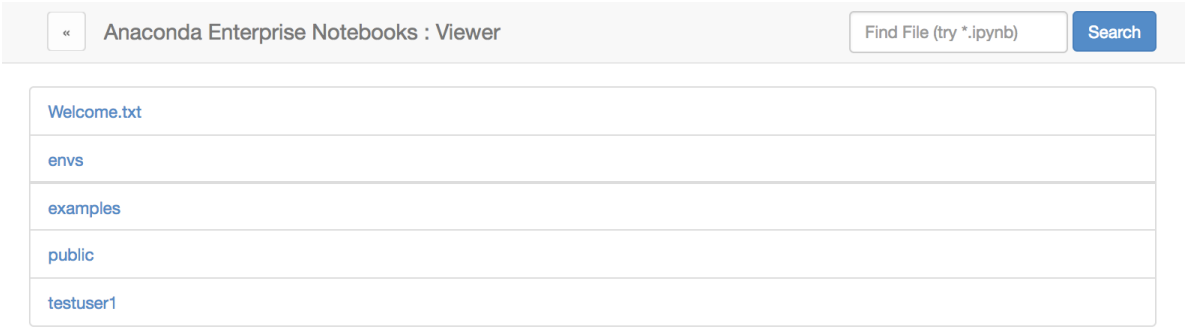
To move between terminal windows, click the **Terminal** tab in the navigation bar, then select the number of the terminal window you want to work in.

Using Viewer

The Viewer application displays a static, view-only version of your notebooks and other text files by rendering the text files directly and using the NBConvert tool to convert notebooks to static HTML.

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Viewer icon.

   Viewer opens in a new browser window:



4. Click any folder to view its contents, or click any filename to view the file.
5. To search for a file or folder name, type text in the Find File box, then press the Enter key. This is not a full-text search, but wildcards are permitted.

Using JupyterLab

JupyterLab is an early alpha-preview of the next generation of the Jupyter Notebook. It is included so that you can take a tour and play with its capabilities.

CAUTION: JupyterLab is experimental. It is not yet intended for production work.

JupyterLab does not include any of the notebook extensions that are available in the *Jupyter Notebook app*.

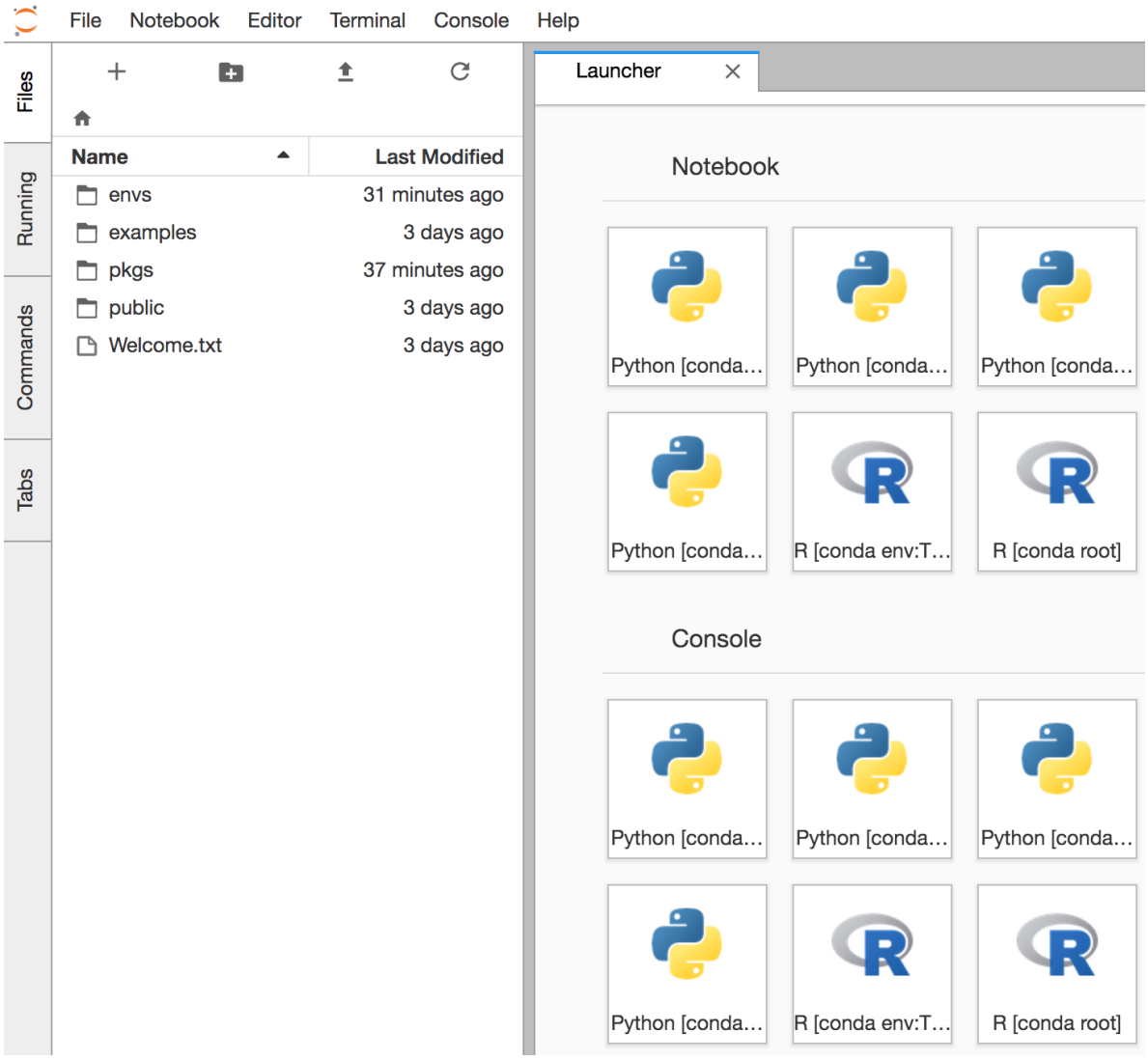
For more information about JupyterLab, see the documentation.

You can also download and print a `Jupyter cheat sheet` on using Jupyter Notebook and the new JupyterLab.

To open JupyterLab:

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click on the JupyterLab icon.

   JupyterLab opens in a new browser window:



Experiment with the application on your own, using the **Notebook**, **Editor**, **Terminal** and **Console** menus.

To review a guided tour of all of the features JupyterLab will contain when it is ready for production, click the Take a tour link in the right pane.

Using Terminal

The Terminal application is a simple bash shell terminal that runs in your browser:

```
+ 1                                                                    bash
(/projects/aen_admin/TestProject/envs/default) ls
envs  examples  pkgs  Presentnotebook.ipynb  public  Sample.ipynb  Welcome
(/projects/aen_admin/TestProject/envs/default)
```

Using Terminal, you can:

- Access your home directory and your project drive.
- Open multiple shells within one instance of Terminal.
- Open multiple instances of Terminal in the same browser window.

1. Log in to AEN.
2. Select a project you want to work on, or create a new project and open it.
3. On the project home page, click the Terminal icon:

Terminal

Terminal opens the project directory in a new browser window.

By default, the project directory is `/projects/username/project-name`.

EXAMPLE: `/projects/TestUser/MyFirstNotebook`

4. To see the physical path of your directory, run the Print Working Directory command `pwd -P`.

   TIP: The physical path `-P` is important because project attaches data to the beginning of your virtual path to keep your project files together.

5. To navigate out of your project directory to your home directory, run the command `cd`.
6. To return to your project directory, run the command `cd/projects/username/project-name`.

TIP: If you are new to navigating in a terminal, you may want to use *the Workbench terminal*, which includes a visual navigation tree in the File Manager.

Using multiple Terminals

You can open as many terminals as you want.

To open another shell in the terminal, in the upper left of the pane, click the plus + icon.

A corresponding number appears after the plus + icon and 1.

To move to another Terminal, click the corresponding number.

The color of the number tab changes to show which terminal is currently selected.

Using Jupyter Notebook

The Jupyter Notebook application allows you to create and edit documents that display the input and output of a Python or R language script. Once saved, you can share these files with others.

NOTE: Python and R language are included by default, but with customization, Notebook can run several other kernel environments.

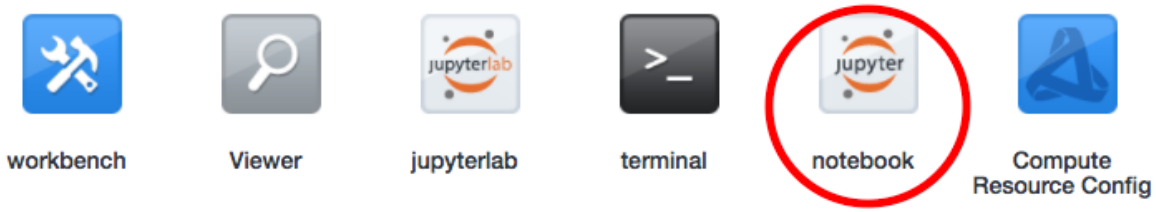
This page provides a brief introduction to Jupyter Notebooks for AEN users.

For the official Jupyter Notebook user instructions, see Jupyter documentation.

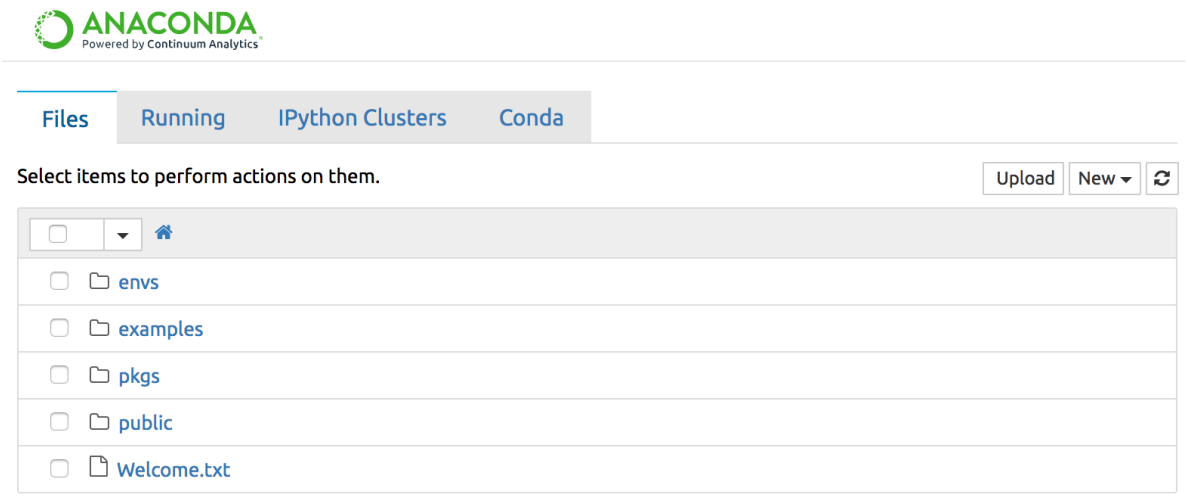
For information on the notebook extensions available in AEN, see *Using Jupyter Notebook extensions*.

Opening the Jupyter Notebook application

1. Log in to AEN.
2. Select the project you want to work on, or create a new project and open it.
3. On the project home page, click the Jupyter Notebook icon:



Jupyter Notebook opens in a new browser window:



TIP: You can see the same *File Manager* in the Terminal, Workbench, and Viewer applications.

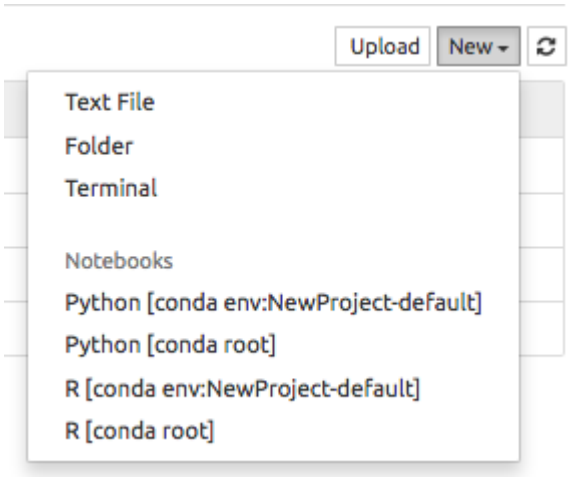
Using example notebooks

The `Examples` folder in Jupyter Notebook contains several types of Notebook examples created in Python—and one with R language—kernel environments.

Open any example notebook to experiment and see how it works.

Creating a new Jupyter Notebook

1. An the top right of the **Files** tab, click the New button.



2. Select the kernel environment to create your new notebook in.

   NOTE: Customizable Python and R Language kernel environments are automatically created for you during project creation.

   - Your project's default conda env kernels are a cloned copy of the root environment. You can customize them and install and delete additional packages.
   - Root environment is managed by your Administrator. You cannot make or save any changes to it.

- You can switch between Python, R language and any other custom kernels in the notebook as you work in your notebook. For more information, see *Using the Synchronize Environments extension*.

The new notebook is saved in the related project directory and displayed.

Using Jupyter Notebook extensions

The following extensions are available for use with AEN's Jupyter Notebook application:

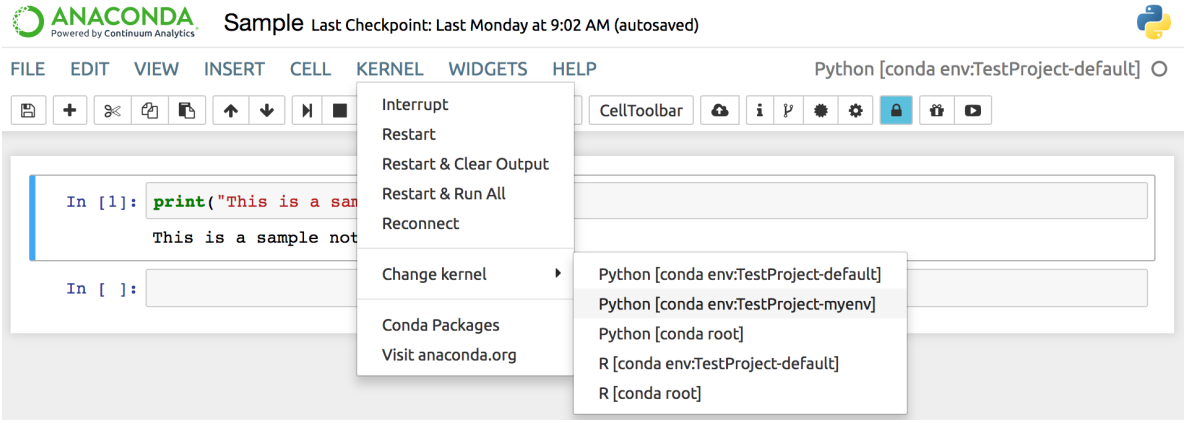
- *Synchronize Environments* with Jupyter from the **Kernel** menu.
- *Locking* adds multi-user capability from the Lock button.
- *Revision Control Mechanism (RCM)* adds Status, Checkout and Commit buttons.
- *Conda environment and package management* tab.
- *Conda notebook* adds conda management inside Notebook from the Kernel > Conda Packages menu option.
- *Anaconda Cloud integration* from the Publish to cloud button.
- *Notebook Present* turns your notebook into a PowerPoint-style presentation.

Using the Synchronize Environments extension

The Synchronize Environments extension allows you to apply a Python, R language or any other custom environment inside your current notebook session, without needing to start up several Notebook instances using each of the selected environments.

To change environments:

1. Open the **Kernel** menu.



2. Click the Change kernel option.
3. From the list, select the environment to use.

NOTE: In AEN 4.1+ the default kernel for projects is `default`. In versions prior to 4.0, the default kernel for projects is `root Python`.

Using the Locking extension

Multi-user capabilities are engaged in AEN when multiple users work in the same notebook file.

The Locking extension allows you to lock a notebook to prevent multiple team members from making changes at the same time. Notebooks are automatically locked when you open them.

If team members open a notebook and make changes while it is locked, their save capability is disabled, and they cannot overwrite the notebook.

To override the lock, they must actively take control of the locked file by clicking the Lock icon in the Notebook menu bar:

NOTE: This is a soft locking model. Team members can choose to override your lock to save their work. If you give team members write access to your files, confirm that they understand that they should never unlock your file unless they are making meaningful, non-destructive team contributions.

Using the Revision Control Mechanism extension

The Revision Control Mechanism (RCM) Jupyter Notebook extension provides simple version control for notebook files. It uses the internal Jupyter functionality to perform tasks.

On the surface, RCM uses a simple linear model, but beneath that is a more complex git-based branching model. This model uses the latest wins as its main merging strategy to prevent merge conflicts.

The RCM Jupyter Notebook extension adds four buttons:

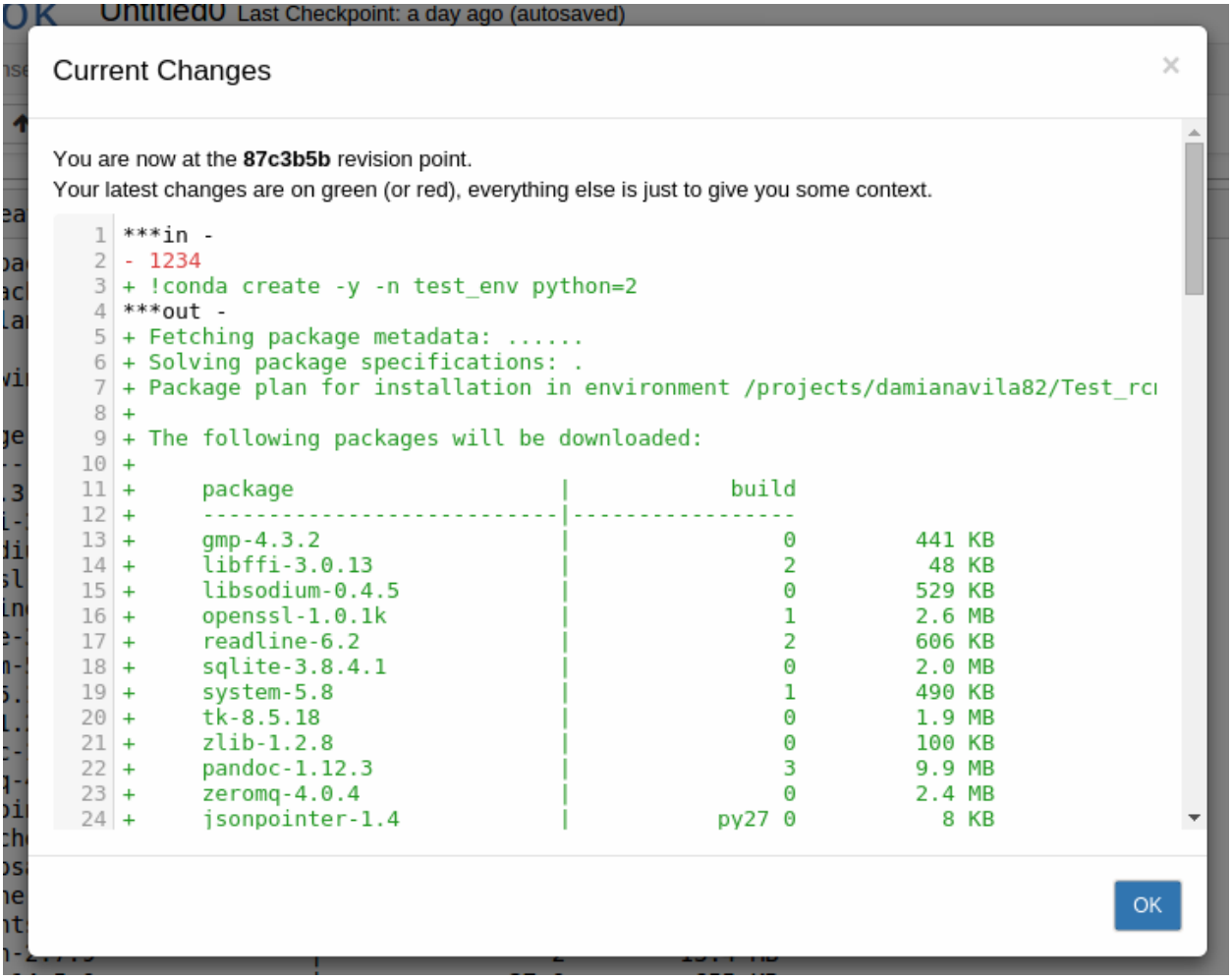
- *Status*.
- *Checkout*.
- *Commit*.
- *Configure git*.

TIP: If you do not see the RCM buttons, see *Setting up RCM for the first time*.

Using the Status button

The Status button allows you to see what revision you are on.

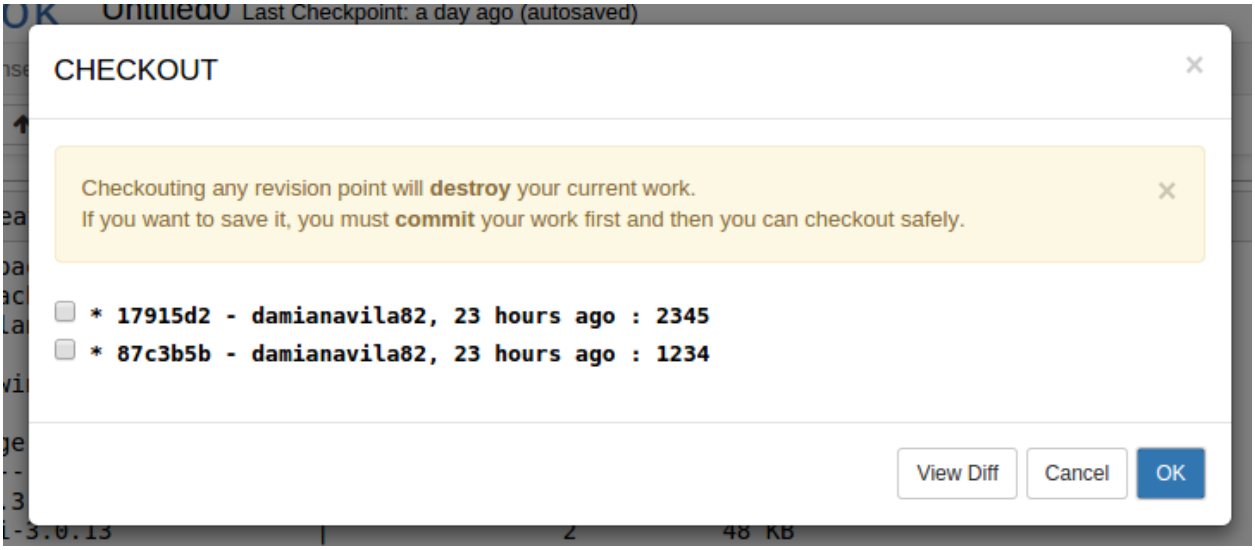
Clicking the Status button displays:



Using the Checkout button

The Checkout button allows you to view a list of the previous revision points, check out a previous revision or compare differences between revisions.

Clicking the Checkout button displays:



Checking out a previous revision

To checkout a notebook at an earlier revision point:

1. Select the checkbox next to the desired revision point.
2. Click the OK button.

   A copy of the notebook at the selected revision point is displayed.

NOTE: If you have not saved the work in your current project window, checking out a previous revision destroys it. If in doubt, click the Cancel button and save your work before reverting to a previous revision point.

Comparing revisions

To compare 2 previous revision points:

1. Select the checkboxes of the revision points to compare.
2. Click the View Diff button.

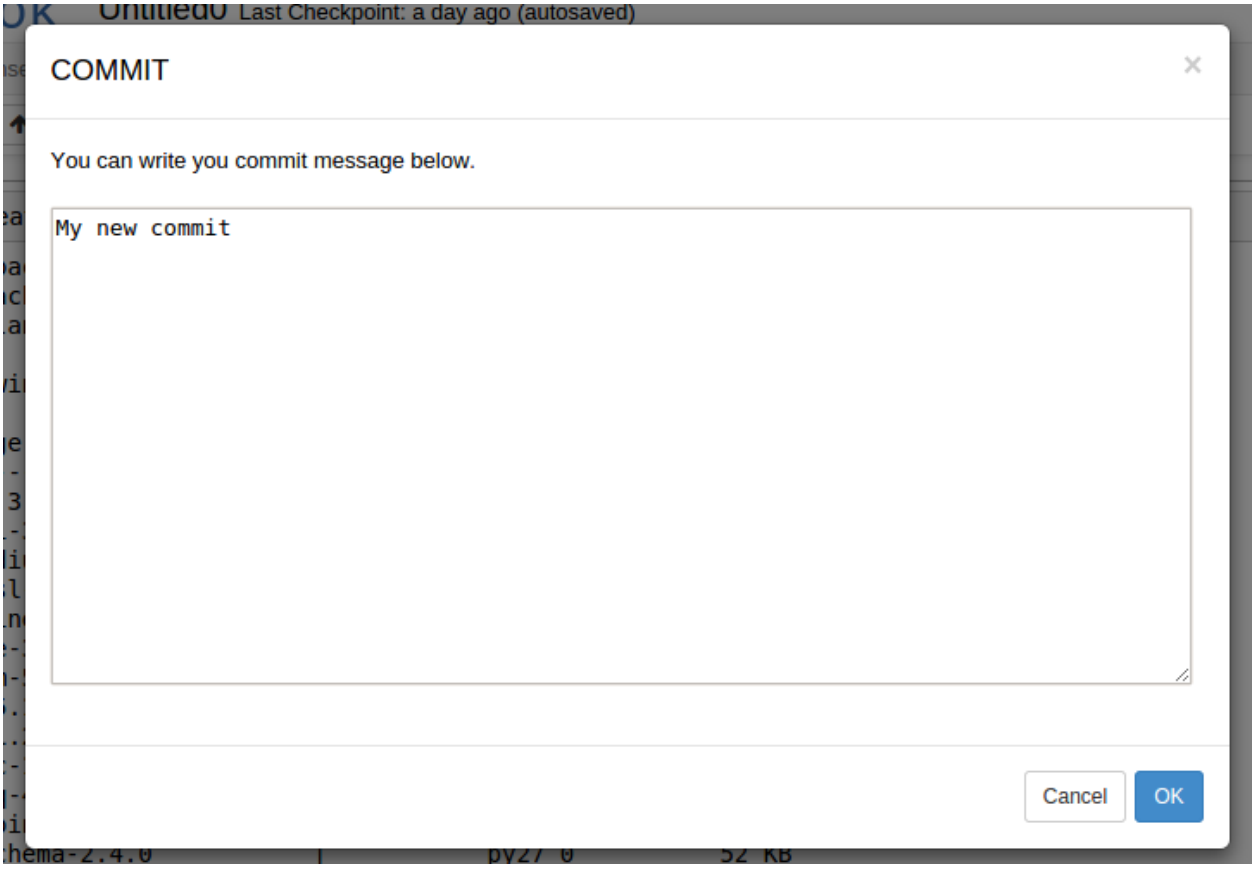
   A side-by-side comparison is displayed.

   Click the Cancel button to close the differences window.

Using the Commit button

The Commit button allows you to save or persist the current changes, keeping a permanent record of any changes that are introduced, so that you do not have to worry about losing important data.

Clicking the Commit button displays:



1. Enter a description of the changes in the commit as a reminder in case you need to revert back to it later.
2. Click the OK button.

   Your changes are committed and a revision point is created.

If Git user name and user email are not set, the following window appears:

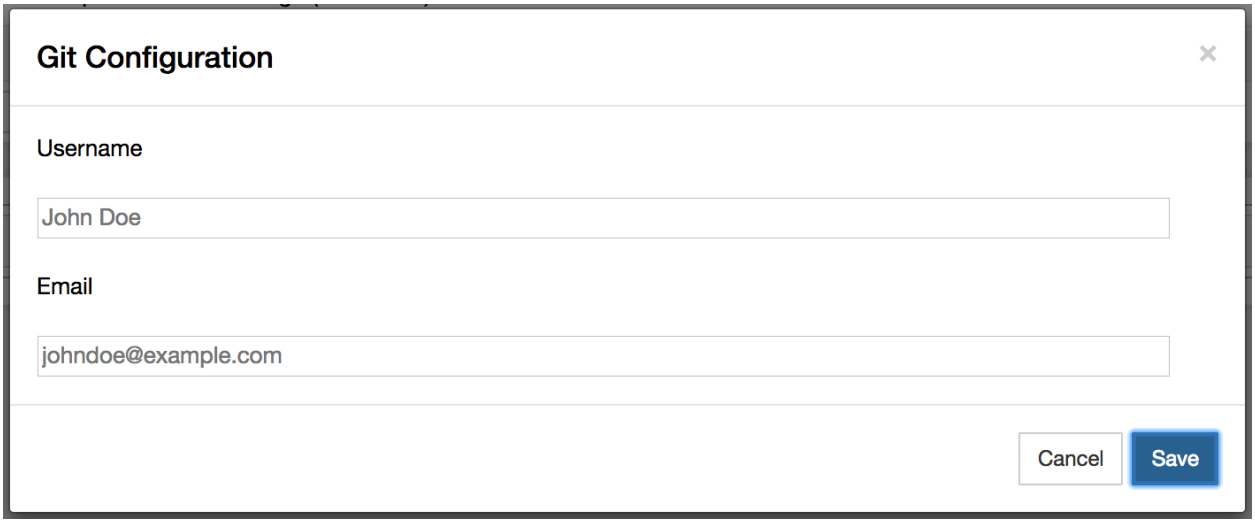
Configure Git and then try to commit again.

TIP: You can roll back committed changes by *checking out a previous version*.

Using the Configure git button

The Configure git button allows you to configure Git user name and email values.

After clicking the Configure Git button, the following window appears:



Enter user name and e-mail address. Click the OK button when finished.

Setting up RCM for the first time

If you do not see the RCM buttons in your notebook:

1. Go to the project home page.
2. Open the Terminal application.
3. In the terminal window, run:

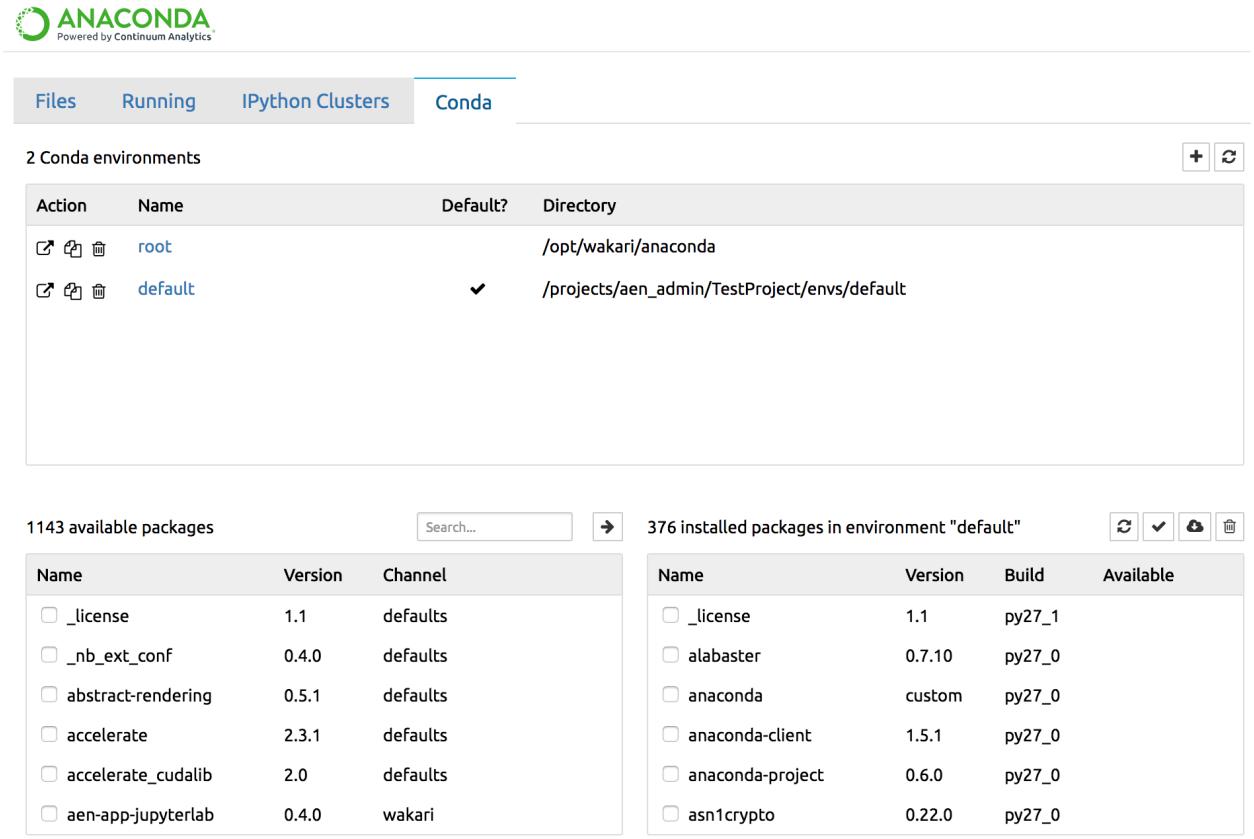
```
git config --global user.email "you@example.com"
git config --global user.name "Your Name"
```

   NOTE: Change `you@example.com` to your email address, and `Your Name` to your actual name.

4. Open Jupyter Notebook and refresh the page.

Using the NBConda extension

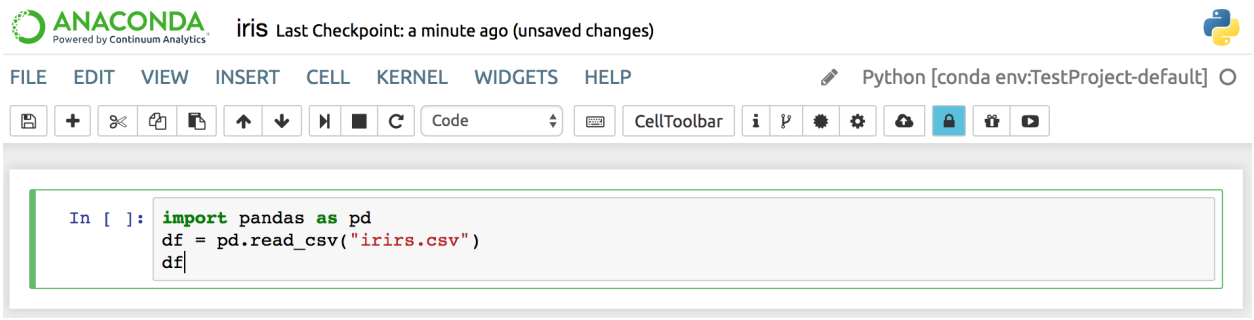
The NBConda extension adds a Conda tab to your notebook for easy environment and package management from within the notebook.



Click the Conda tab in a notebook to display:

- Conda environments list—export, clone or delete an environment in the action column, or create a new environment by clicking the plus + icon. Switch to an environment by clicking it; packages for that environment are displayed below in the installed packages list.
- Conda available packages list—for the selected environment in currently configured channels, search for packages and click a package name to install it.
- Installed packages list—in the selected environment, check for updates, update or delete selected packages.

TIP: While you are in any notebook, you can jump to the NBConda extension for that environment by clicking the **Kernel** menu and selecting Conda Packages:



Using the Conda Notebook extension

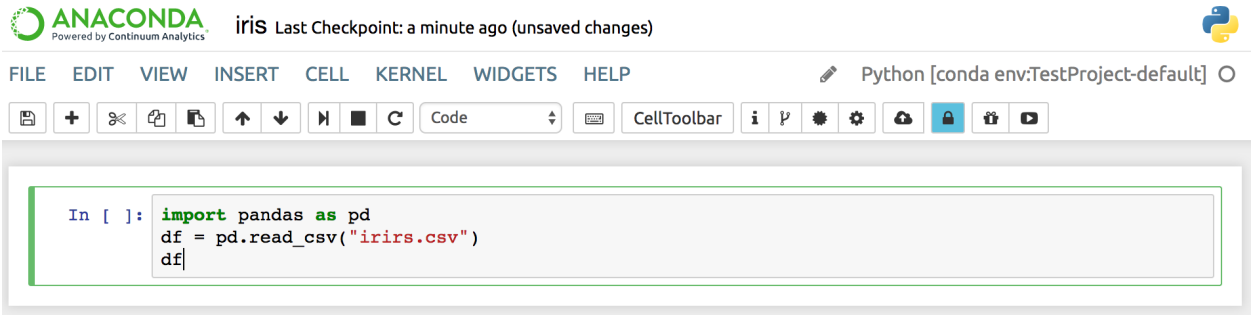
The Conda Notebook extension adds the Conda Packages option to the **Kernel** menu.

Select the Conda Packages option to display a list of all of the Conda packages that are currently used in the environment associated with the running kernel, as well as any available packages.

From the Conda Packages option, you can perform all of the tasks available in the *Conda tab*, but they will only apply to the current environment.

Using the Anaconda Cloud extension

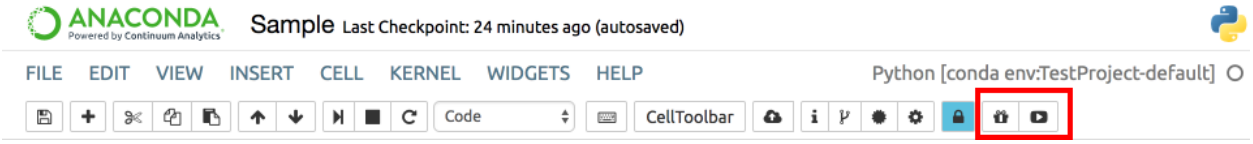
The Anaconda Cloud extension adds the Cloud button to your notebook, allowing you to easily upload your notebook to Cloud:



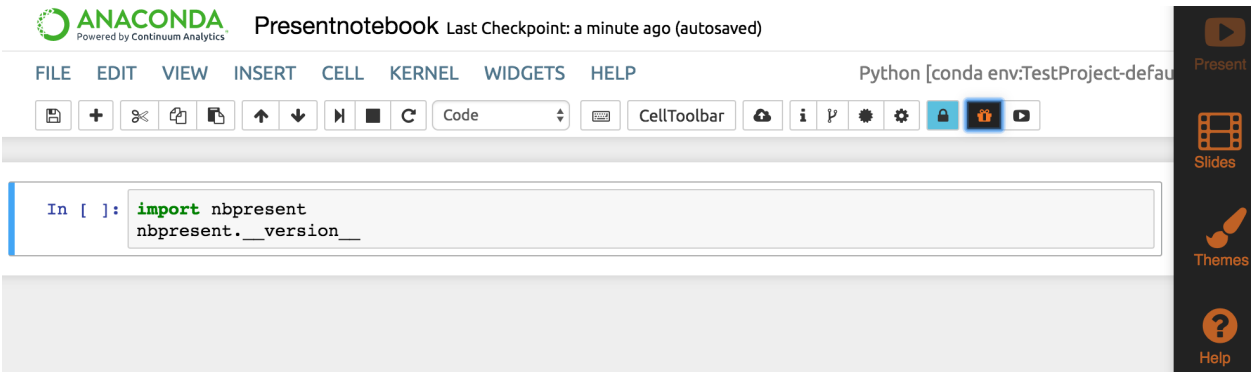
Using the Notebook Present extension

The AEN Notebook Present extension turns your notebook into a Microsoft PowerPoint-style presentation.

The Present extension adds 2 buttons to Notebook's menu bar—Edit Presentation and Show Presentation:



To begin using Notebook Present, click the Edit Presentation button.

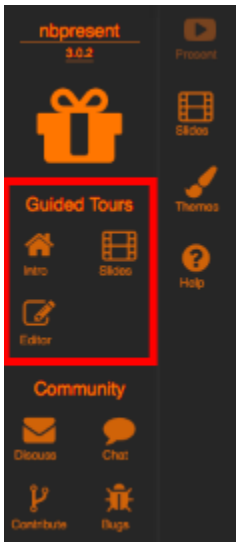


The Notebook Present sidebar is displayed on the right side of your browser:

Clicking each icon changes the menu and layout of your notebook.

Clicking the Help icon displays 3 tours—demonstrations—of the main features of Present:

- *Intro tour*.
- *Slides tour*.
- *Editor tour*.



Select one of the tours to view a short presentation regarding the specifics of that feature.

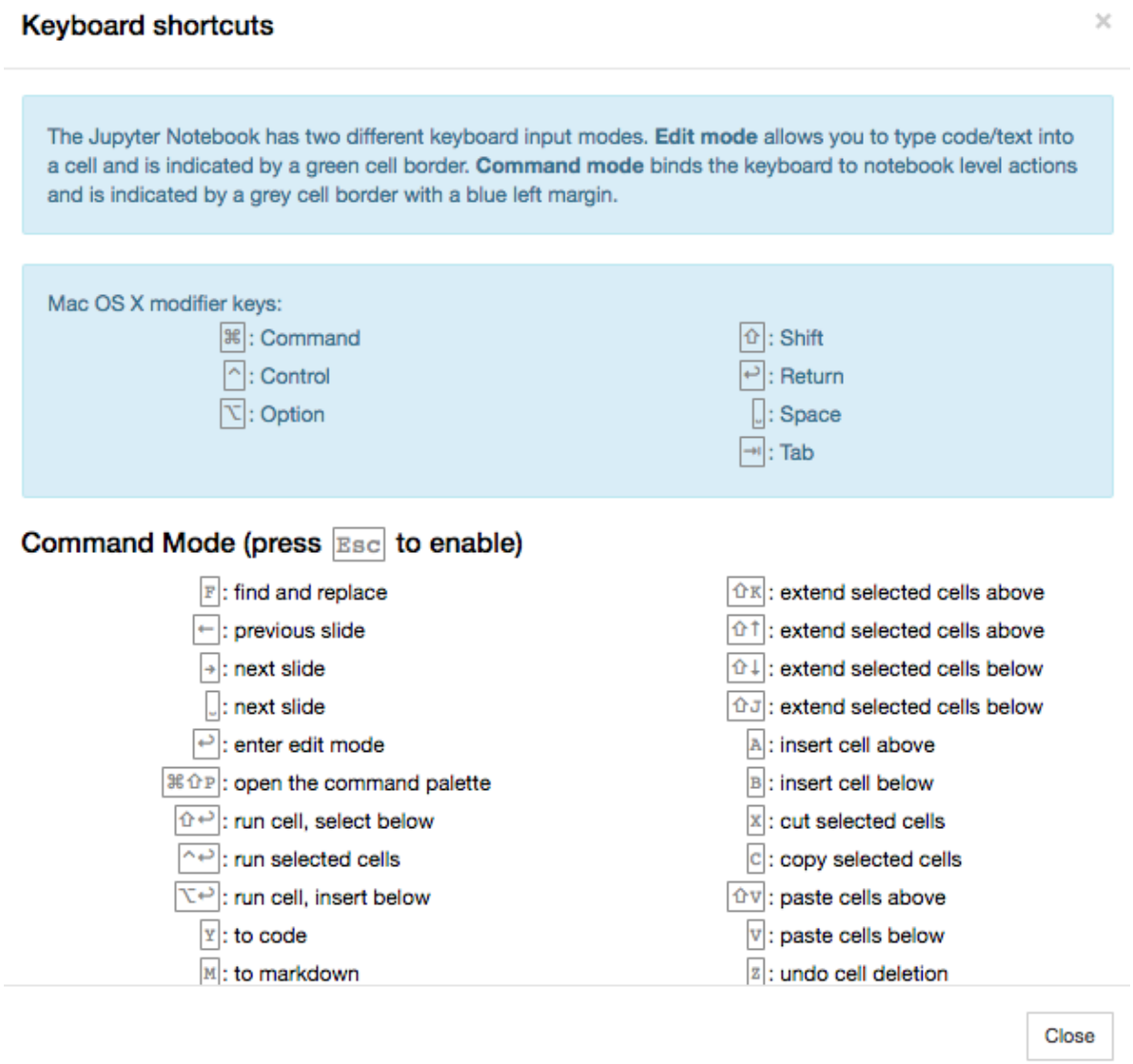
Intro tour

The Intro tour is a 2-minute presentation that explains how to use the main features of Present, including a description of each button's purpose.

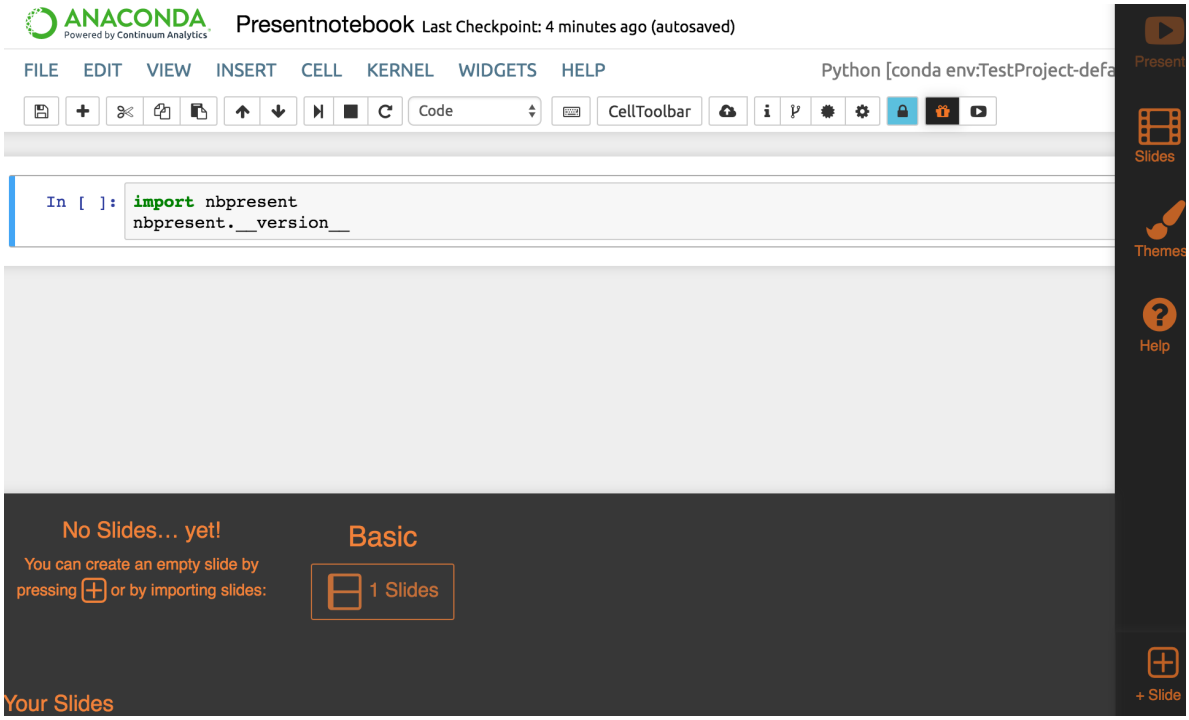
NOTE: At any time, you can pause, go back to the previous or move forward to the next slide.

The following information is covered in the Intro tour:

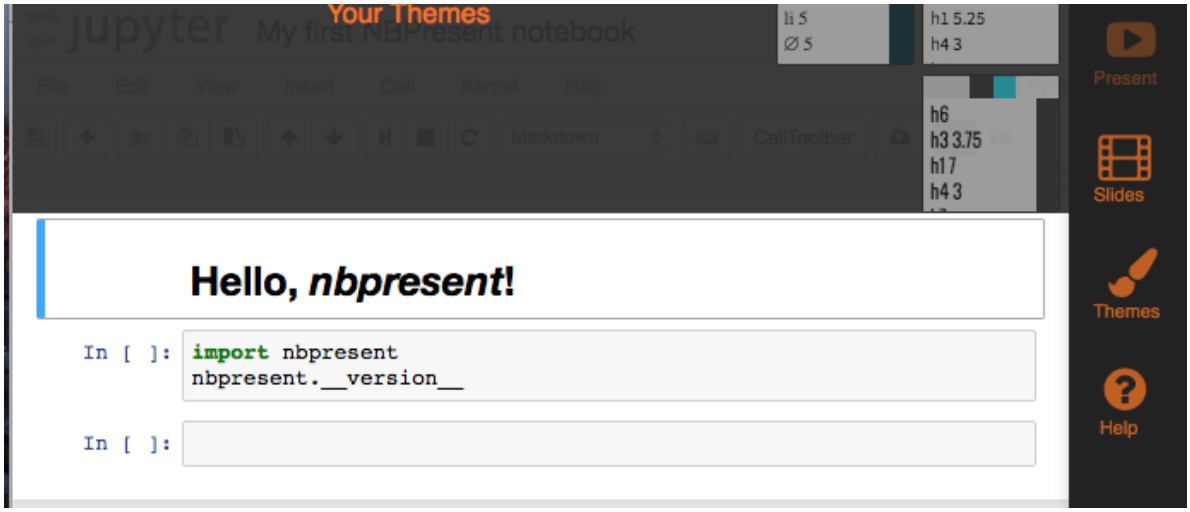
- App Bar—When Authoring, this allows you control the content and style of your presentation. It also can be used to activate several keyboard shortcuts for editing:



- Stop Authoring—Clicking the Edit Presentation button again stops Authoring, and removes all keyboard shortcuts.
- Show Presentation—If you just want to run your presentation without using any Authoring tools, just click the Show Presentation button.
- Presenting/Authoring—Once you've made some slides, start Presenting, where you can use most Notebook functions with the Theme we have defined, as well as customize slides on the fly.
- Slides button—Slides, made of Regions linked to Cell Parts are the bread and butter of any presentation, and can be imported, created, linked, reordered, and edited here.



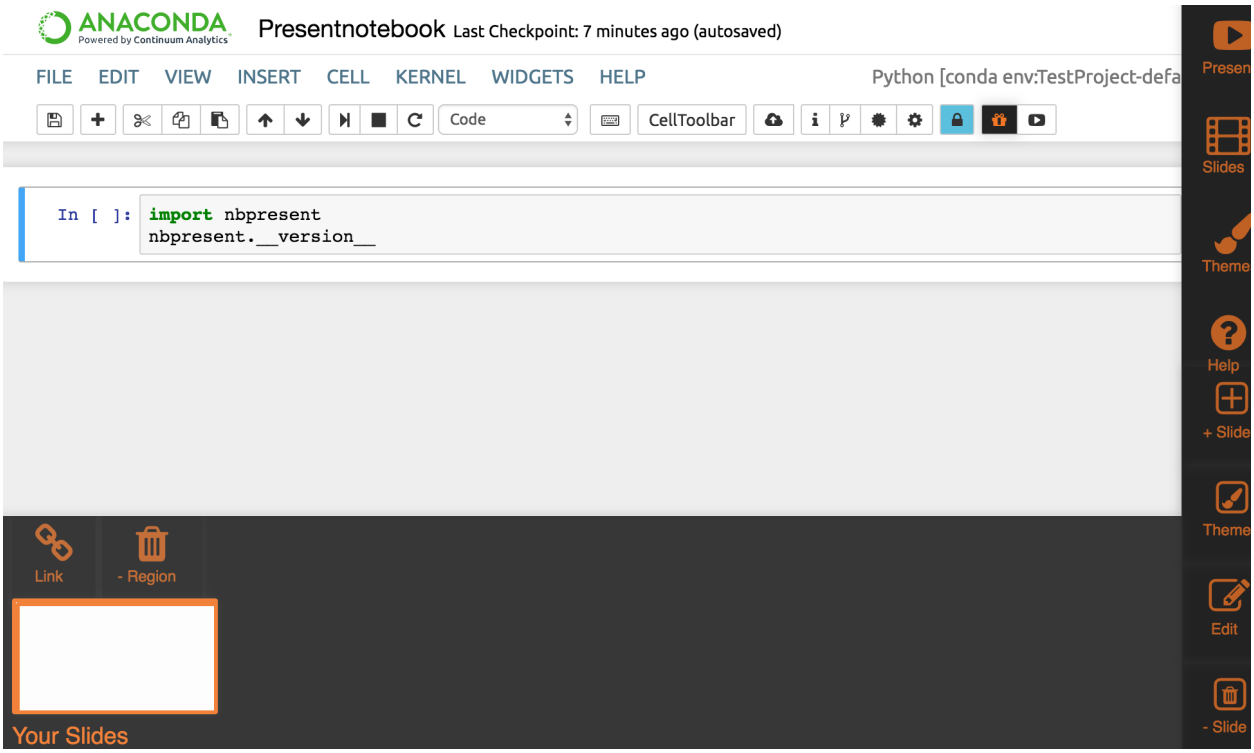
- Theming—Theming lets you select from existing colors, typography, and backgrounds to make distinctive presentations. The first theme you select will become the default, while you can choose custom themes for a particular slide, like a title.



- Saving—Whenever you save your Notebook, all your presentation data will be stored right in the Notebook .ipynb file.
- Downloading—After you've made a presentation, you can download it as an HTML page by choosing Download → Download As: Presentation (.html) in the menu.
- Help—Activate Help at any time to try other tours, connect with the Present developers and community, and other information.

Slides tour

Slides make up a presentation. Clicking Slides toggles the sorter view and the Slide Toolbar on and off:



The Slides tour explains how to create and manage slides, including the following information:

- Slide Toolbar—Create a new slide. Clicking + Slide will offer some choices for creating your new slide.
- Import—The quickest way to create a presentation is to import each cell as a slide. If you've already created slides with the official slideshow cell toolbar or RISE, you can import most of that content.
- Template Library—You can create a presentation from an existing template.
  - Reuse Slide as Template—You can create a presentation based on an existing slide.
  - Simple Template—A common template is the Quad Chart, with four pieces of content arranged in a grid.
- Region—The Quad Chart has four Regions. To select a region, click it.
  - Link a Region to a Cell Part—Each Region can be linked to a single Cell Part using the Link Overlay, which shows all of the parts available.
    - Cell Part: Source (blue)–Source, such as code and Markdown text.
    - Cell Part: Outputs (red)–Outputs, such as rich figures and script results.
    - Cell Part: Widgets (purple)–Jupyter widgets, interactive widgets that provide both visualization and user input.
    - Cell Part: Whole (orange)–Finally, a Whole Cell, including its Source, Widgets and Outputs can be linked to a single region.
  - Unlink a region from a Cell Part—Unlinking removes the connection between a region and a cell part, without deleting either one.
  - Region: Trashing—Trashing a Region permanently deletes it, without affecting any linked Cell Part.

  - Part Thumbnail—We'll try to draw a part thumbnail. It can only be reliably updated when a linked Cell Part is on-screen when you mouse over it, but you should usually be able to get an idea of what you're seeing. The colors of the regions correspond to the cell types.

- Presenting—Clicking the Present button while editing brings up the Presenter with editing mode still enabled:
  - Linked inputs and widgets are still interactive.
  - Go forward—Click to go to the next slide
  - Go back—Click to go back to the previous slide
  - Go back to the beginning—Click to go back to the first slide
  - My work is done here—Click to go back to the Notebook.

Editor tour

Once you've made a few slides, you'll likely want to customize them. The Editor tour explains how to edit your notebook, including the following information:

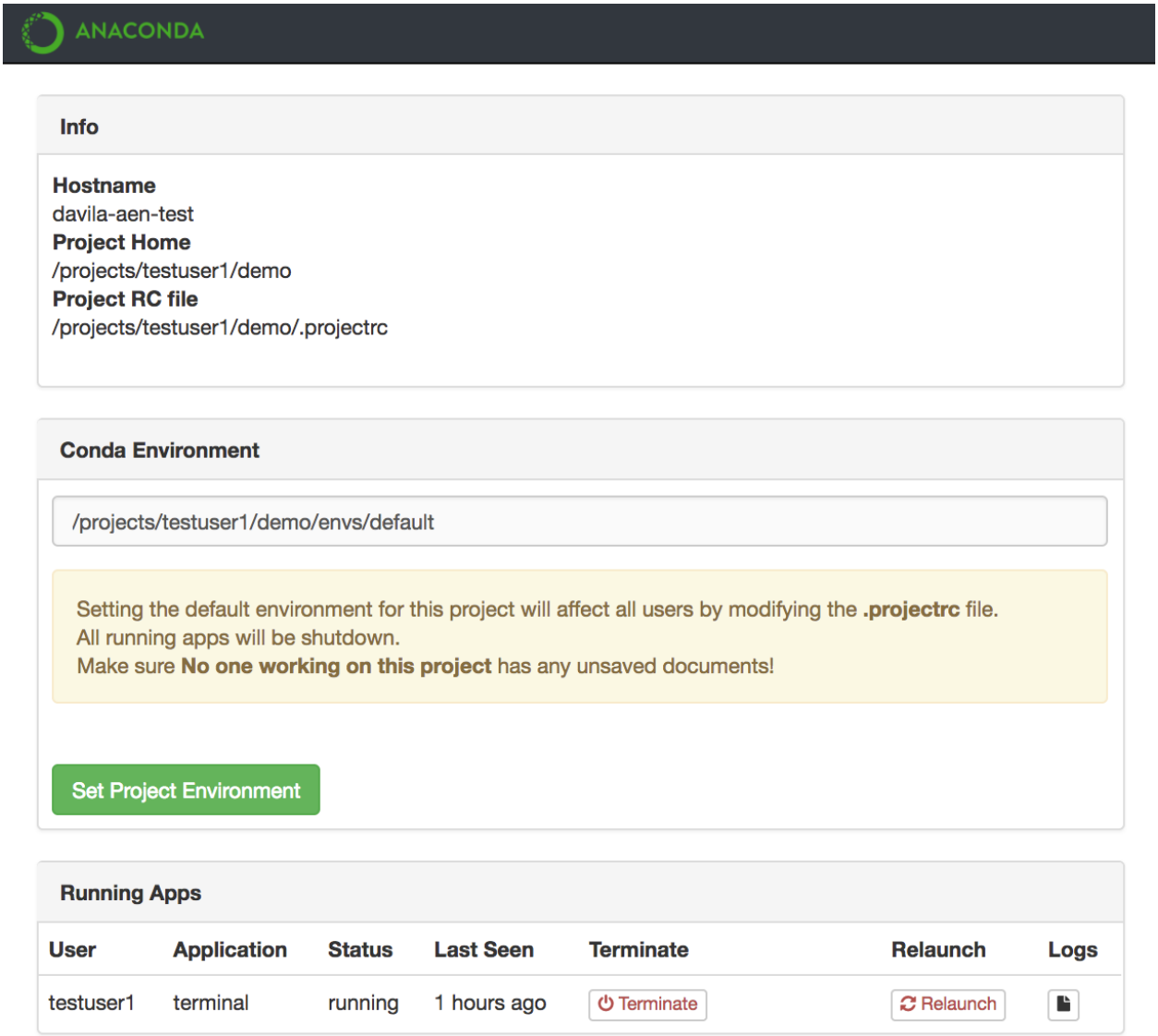
- Editing Slides—Activate the Slide Editor by double-clicking it, or by clicking Edit Slide.
- Region Editor—Click to drag Regions around and resize them.
- Region Tree—Reorder Regions and see the details of how Regions will show their linked Parts.
- Add Region—Add new regions.
- Attribute Editor—Edit the properties of a region.
- Data Layouts—In addition to manually moving regions, you can apply these layouts to automatically fill your slides.
- More Regions—Add more regions—with a weight of 1.
- Tree Weight—Make a Region bigger or smaller, based on its relative weight.
- 12 Grid—A compromise between the Free and Treemap layouts, the 12 Grid option rounds all of the values in a layout to a factor of 12.

Using Compute Resource Configuration

The Compute Resource Configuration (CRC) application displays information about the current project and allows you to set a custom project environment and view and manage your other AEN applications, including stopping, starting, restarting and viewing the logs of each.

The CRC application screen contains 3 sections:

- *Info*.
- *Conda environment*.
- *Running apps*.



Info

The Info section displays:

- Hostname—IP address of the host computer.
- Project Home—File path to the project home.
- Project RC file—File path to the project runtime configuration file `.projectrc`. This file is sourced when a user opens any AEN application. It sets several AEN internal environment variables, sets up the project environment and sets additional user environment variables for the project.

Conda environment

This section displays the path to the default conda environment.

CAUTION: Changing the default environment will affect all users. Be sure that no team members have any unsaved documents before changing the project environment.

To change the default conda environment location:

1. Edit the path to point to your preferred conda environment.
2. Click the Set Project Environment button.

   Your `.projectrc` file is modified.

Running apps

The Running Apps section displays a list of users and the applications that are in use, as well as when the app was last modified.

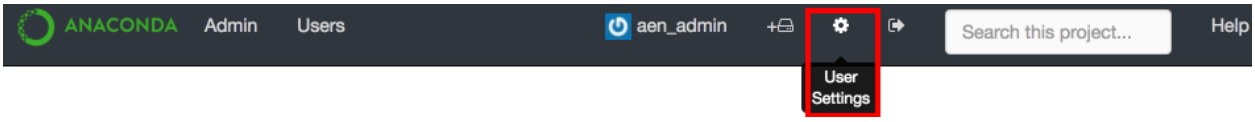
To terminate any individual application, click the Terminate button.

To stop and re-launch any individual application, click the Relaunch button.

To review the run logs of any active application, which may be useful for troubleshooting, click the Logs button.

Managing your account

To access your account information, click the User Settings icon in the AEN navigation bar:



Updating your public profile

Your public profile is made up of a name, a personal URL, your company and location.

1. In the left navigation pane, click the **Public Profile** tab.
2. To update your profile picture, create a Gravatar that is associated with the email address you used to create your AEN account. The gravatar will automatically appear.

Changing your password

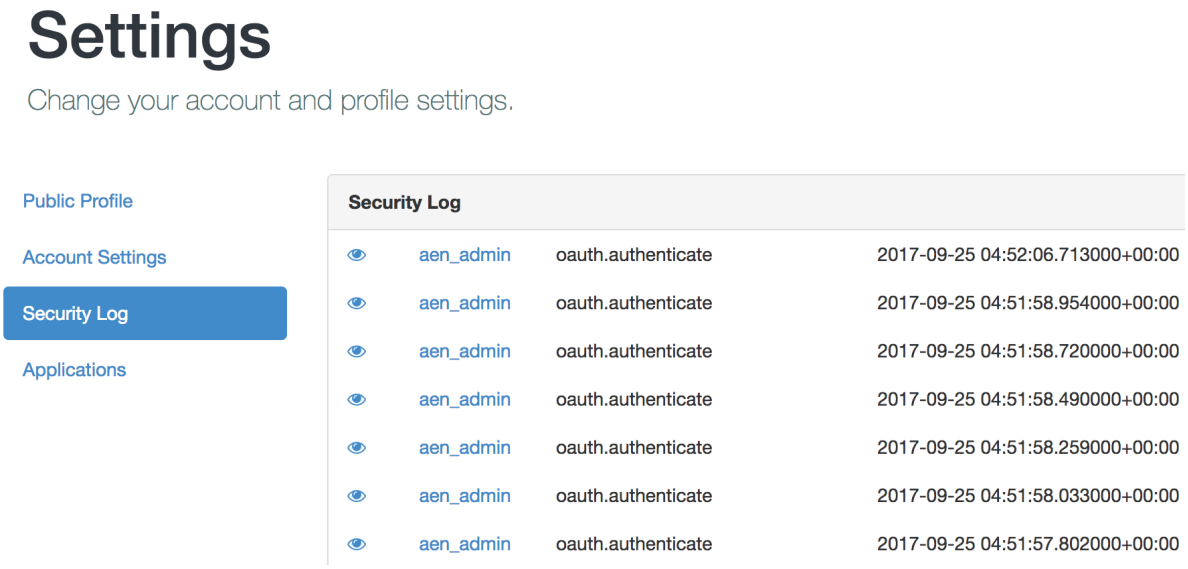
1. In the left navigation pane, click the **Account Settings** tab.

Deleting your AEN account

1. In the left navigation pane, click the **Account Settings** tab.

Viewing account operations

1. In the left navigation pane, click the **Security Log** tab to view a list of operations performed on your account.

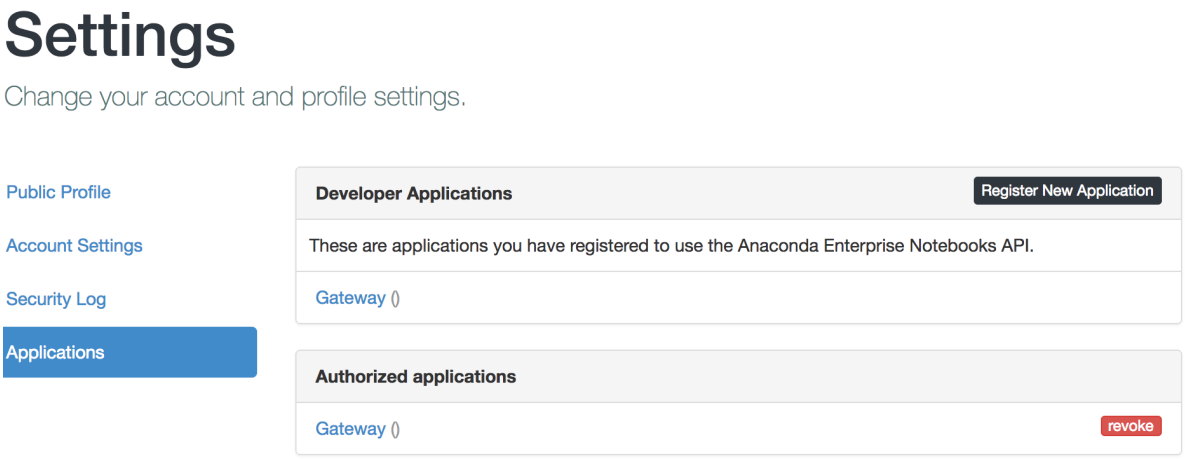


2. For more information about an operation, click the Eye icon to the left of the the operation name.

Registering an application

If you want to create an application for AEN or have already done so, you must register your application.

1. In the left navigation pane, click the **Applications** tab.



2. Click the Register New Application button to open a form for registering your application.

Advanced tasks

Advanced tasks are best-suited for users who are comfortable working in a Terminal.

Working with environments

AEN runs on conda, a package management system and environment management system for installing multiple versions of software packages and their dependencies and switching easily between them.

A conda environment usually includes 1 version of Python or R language and some packages.

The ability to have a custom project environment is one of the most powerful features of AEN. Your project environment is integrated so that all of your project applications recognize it and all of your team members have access to it.

This section contains information about:

- *Creating a default conda environment using the Jupyter Notebook application*
- *Creating a default conda environment using the Jupyter Notebook application*
- *Using your conda environment in a notebook*
- *Customizing your conda environment*
- *Installing a conda package using Terminal*
- *Installing a conda package using Notebook*
- *Uninstalling a conda package*

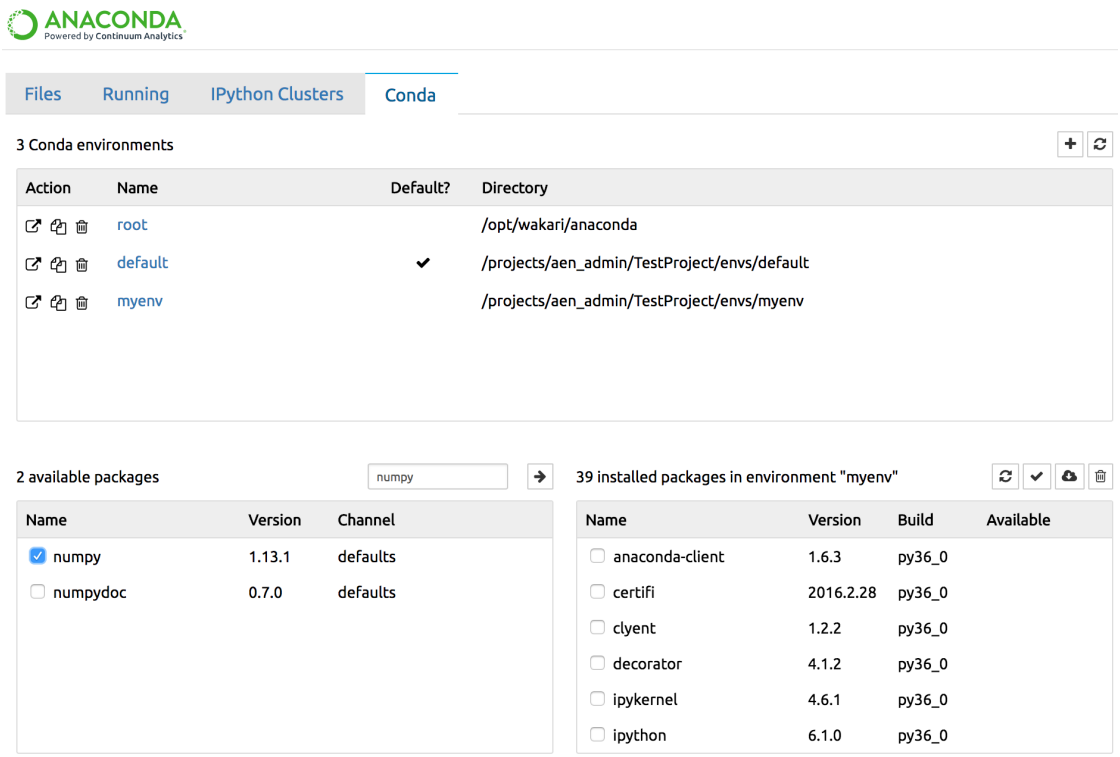
NOTE: This conda environments guide is specific to AEN. For full conda documentation—including cheat sheets, a conda test drive, and command reference—see the conda documentation.

Creating a default conda environment using the Jupyter Notebook application

You can create, activate, and install packages and deactivate environments from within the Notebook menu bar.

To install from the Notebook menu bar:

1. Click the **Conda** tab and select the plus sign icon.
2. Search for `numpy` in the package search box.
3. Select numpy from the search results.



1. Click the Install button.

The environment is added to the project's `env` directory.

Creating a default conda environment using Terminal

In AEN, all new environments created with conda automatically include Python, Jupyter Notebooks and pip. You can specify any other packages you want included in your new environment.

TIP: By default, conda creates a new environment in your project's `env` directory—so that all team members have access to the environment. For information about limiting your team member's read, write or execute permissions, see *Workbench*.

To create a new environment within your AEN account, run the command `conda` in a *Terminal* application.

EXAMPLE: To create a new environment named `WeatherModel` that contains Python, NumPy, pip and Jupyter Notebooks in your project's `env` directory:

1. Log in to AEN.
2. Open a project.
3. On the project home page, click the Terminal application icon to open a Terminal.
4. Create the environment:

   ```
   conda create -n WeatherModel numpy
   ```

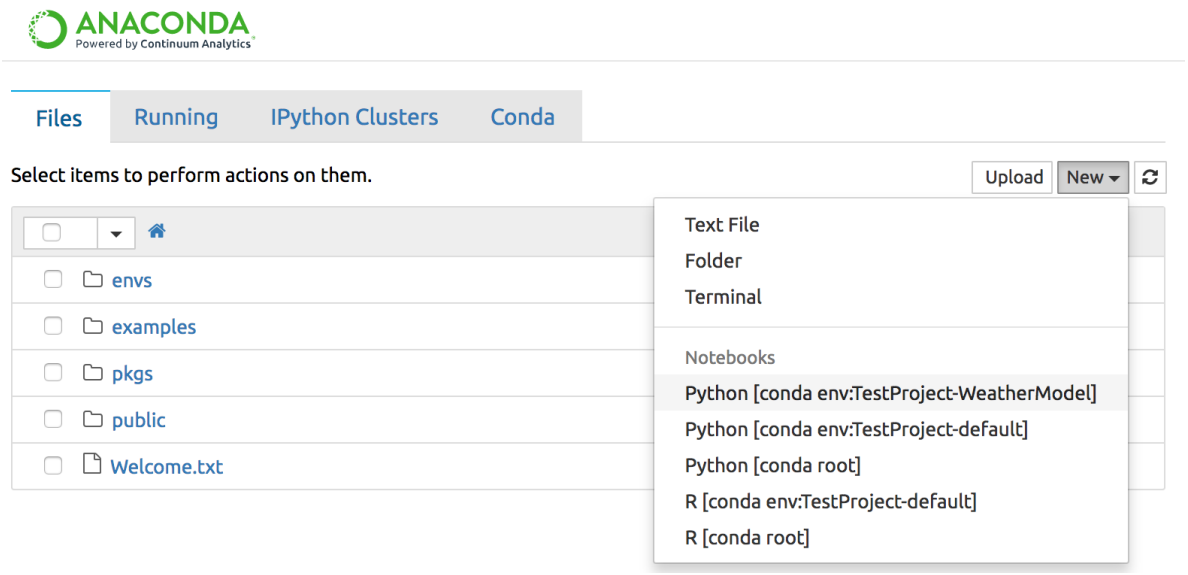
   TIP: Python, pip and Jupyter Notebooks are automatically installed in each new environment. You only need to specify NumPy in this command.

5. Make the new environment your default:

```
source activate WeatherModel
```

6. To use your new environment with Jupyter Notebooks, open the Notebook application.
7. Click the New button to open a new notebook. In the drop-down menu under Notebooks, the environment you just created is displayed.
8. To activate that environment, select it.

   The environment is added to the project's `env` directory.



NOTE: You can deactivate the new environment when you are finished with your notebook by opening the Terminal application and running the command `source deactivate`.

Using your conda environment in a notebook

Whether you have created an environment using conda in a terminal, or from the **Conda** tab in a notebook, you can use the conda environment in the same way.

When working in a notebook, to select the environment you have created and want to use with that notebook, in the **Kernel** menu, select Change Kernel.

EXAMPLE: If you have an environment named `my_env` in a project named `test1` that includes NumPy and SciPy and you want to use that environment in your notebook, in the **Kernel** menu, select Python [conda env:test1-my_env].

The notebook code will run in that environment and can import NumPy and SciPy functions.

Customizing your conda environment

If you need a Python package that AEN doesn't include by default, you can install additional packages into your AEN environment.

TIP: You cannot install packages into the default Anaconda environment. You must create your own environment before installing a new package into that environment.

AEN is built on Anaconda, so you can install additional Python packages using conda or pip—both of which are included with Anaconda.

Installing a conda package using Terminal

To install a conda package using the Terminal application:

1. Create and activate the environment using the steps in *Creating a default conda environment using the Jupyter Notebook application*.
2. In your Terminal application, run the command `conda install <packagename>`.

   NOTE: Be sure to specify the Python version you want when using conda to create the environment, or it will use the same version as root.

   EXAMPLE:

   ```
   conda create -n mypy3 python=3 numpy scipy
   ```

   A conda environment named mypy3, running on Python 3 and containing NumPy and SciPy is created. All subsequent packages added to this environment will be the Python 3 compatible versions.

Installing a conda package using Notebook

You can also install the package within your notebook without using the terminal app:

1. From the Notebook application, click the **Conda** tab.
2. Select the environment you wish to use.
3. Search for the package you want to add.
4. Click the Install button.

Uninstalling a conda package

To uninstall a package using this method, run the command `conda remove <packagename>`.

NOTE: Replace `<packagename>` with the name of the package you are uninstalling.

Using visualization packages

AEN supports multiple visualization packages for Python and R language.

For Python, the default environment has *Matplotlib* and *Bokeh* installed.

For R language, the default environment has *r-ggplot2* and r-bokeh installed.

Matplotlib

Matplotlib is a Python 2D and 3D plotting and visualization library that produces publication-quality figures in a variety of hardcopy formats and interactive environments across platforms.

To display Matplotlib figures in the output cells of a notebook running the default environment, run:

```
import matplotlib.pyplot as plt
%matplotlib inline
```

Any Matplotlib figures in the notebook are displayed in it's output cells.

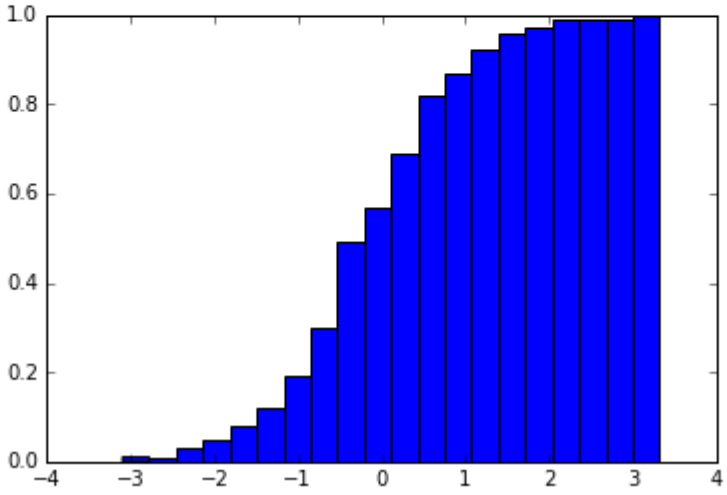
EXAMPLE: The following screenshot is of a cumulative density function (CDF) plot using values taken from a normal distribution:

```
In [1]: import matplotlib.pyplot as plt
        %matplotlib inline

In [2]: import numpy as np

        x = np.random.normal(size=100)

In [3]: plt.hist(x, normed=True, cumulative=True, bins=20);
```



For more information, including a gallery, examples, documentation and a list of plotting commands, see the Matplotlib website.

Bokeh

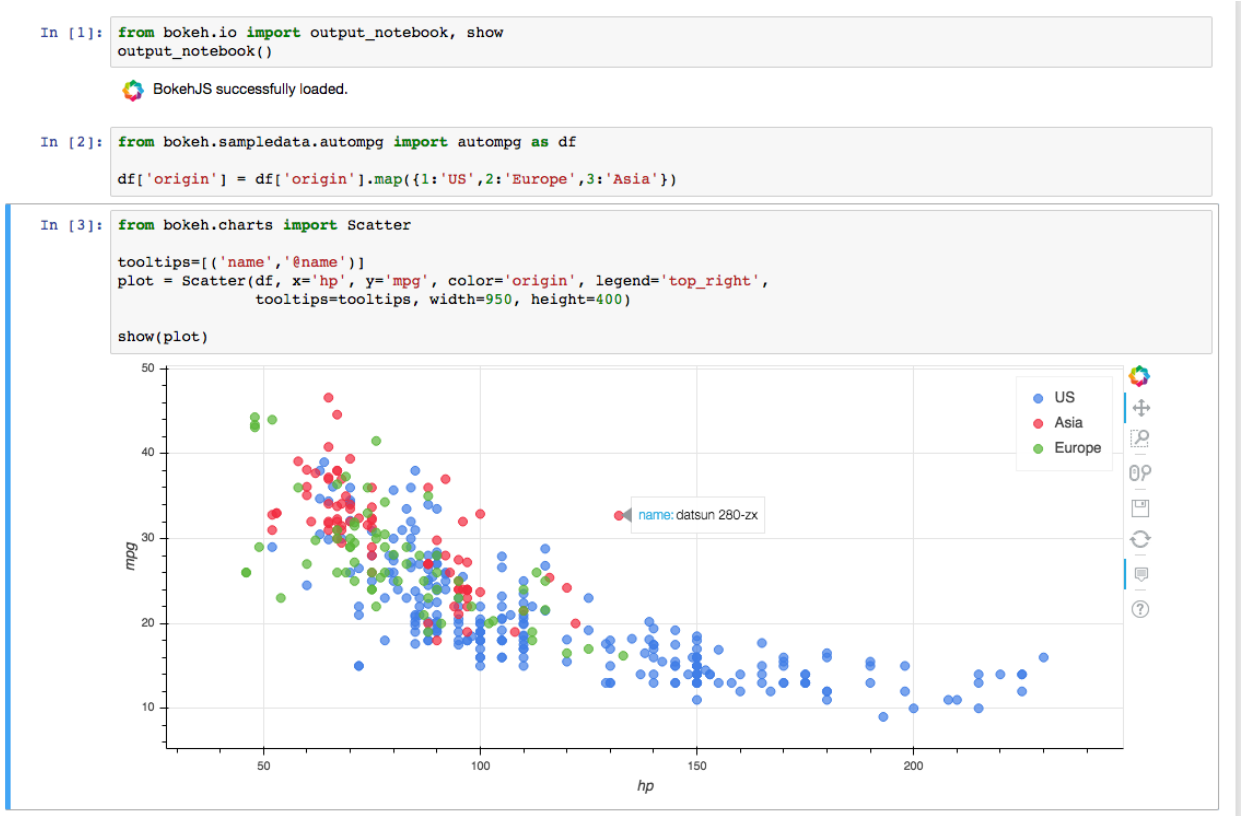
Bokeh is an interactive visualization library that targets modern web browsers to provide elegant, concise construction of novel graphics.

To display Bokeh figures in the output cells of a notebook running the default environment, run:

```
from bokeh.io import output_notebook, show
output_notebook()
```

Any Bokeh figures in the notebook are displayed in its output cells.

The following screenshot is of a scatter plot of miles-per-gallon vs. horsepower for 392 automobiles using the `autompg` sample dataset:



ggplot2

Ggplot2 is a plotting system for R language which is based on the grammar of graphics. Ggplot2 tries to take only the good parts of base and lattice graphics and none of the bad parts.

To use ggplot2 with AEN:

1. Open a new Notebook using the R kernel.
2. Load the ggplot2 library with the following code:

```
library(ggplot2)
```

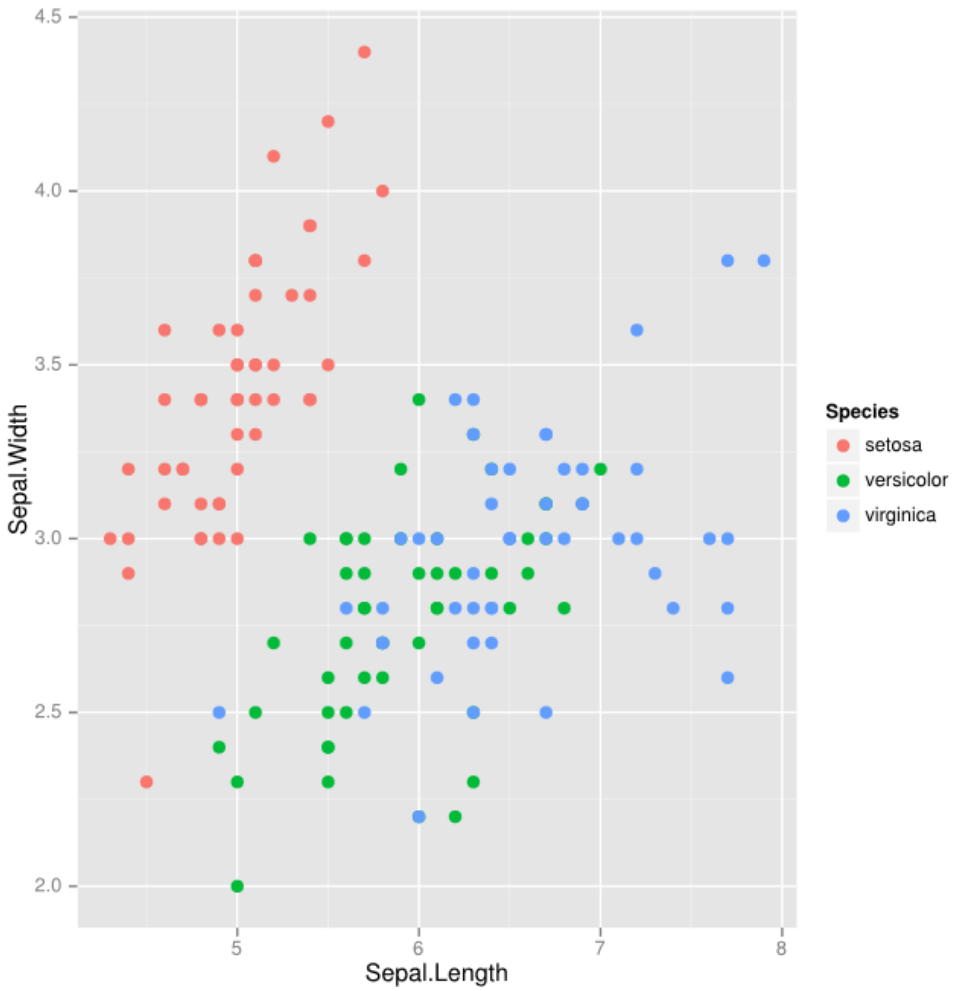
The ggplot2 library is loaded and ready for use in AEN.

The following screenshot is of a scatter plot of sepal width vs sepal length using the `iris` dataset provided by the `dplyr` library:

```
In [5]: library(dplyr)

In [6]: library(ggplot2)

In [7]: ggplot(data=iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species)) + geom_point(size=3)
```



Using environment variables

Some Python packages depend on environment variables for correct operation.

EXAMPLE: Theano requires that the directory containing the CUDA compiler is included in the $PATH environment variable in order for GPU acceleration to be enabled.

To change environment variables for all AEN applications, modify the project runtime configuration file `.projectrc`. For more information, see *Using Compute Resource Configuration*.

`.projectrc` sets several AEN internal environment variables, sets up the project environment and can set additional user environment variables for that project. This file is sourced when a user opens any AEN application—including Jupyter Notebook—and Jupyter kernels will be able to read the included environment variables.

Cheat sheet

See the `Anaconda Enterprise Notebooks cheat sheet` PDF (232 KB) for a single-page summary of the most important information about using AEN.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

AEN application not working properly

An AEN application is not working as expected.

Cause

There are several reasons an application may not work as expected.

Solution

Most AEN application issues can be resolved by following these steps:

1. Refresh the page.
2. If the issue is not resolved, close and open the application.
3. If the issue is not resolved, *stop and restart your project*.
4. If the issue is not resolved, check that you are using the latest version of your web browser—Chrome, Safari, Edge, or Firefox.
5. Log out of AEN.
6. Restart your browser, and log back in.

If you continue to have issues, then please contact your administrator or enterprise support representative.

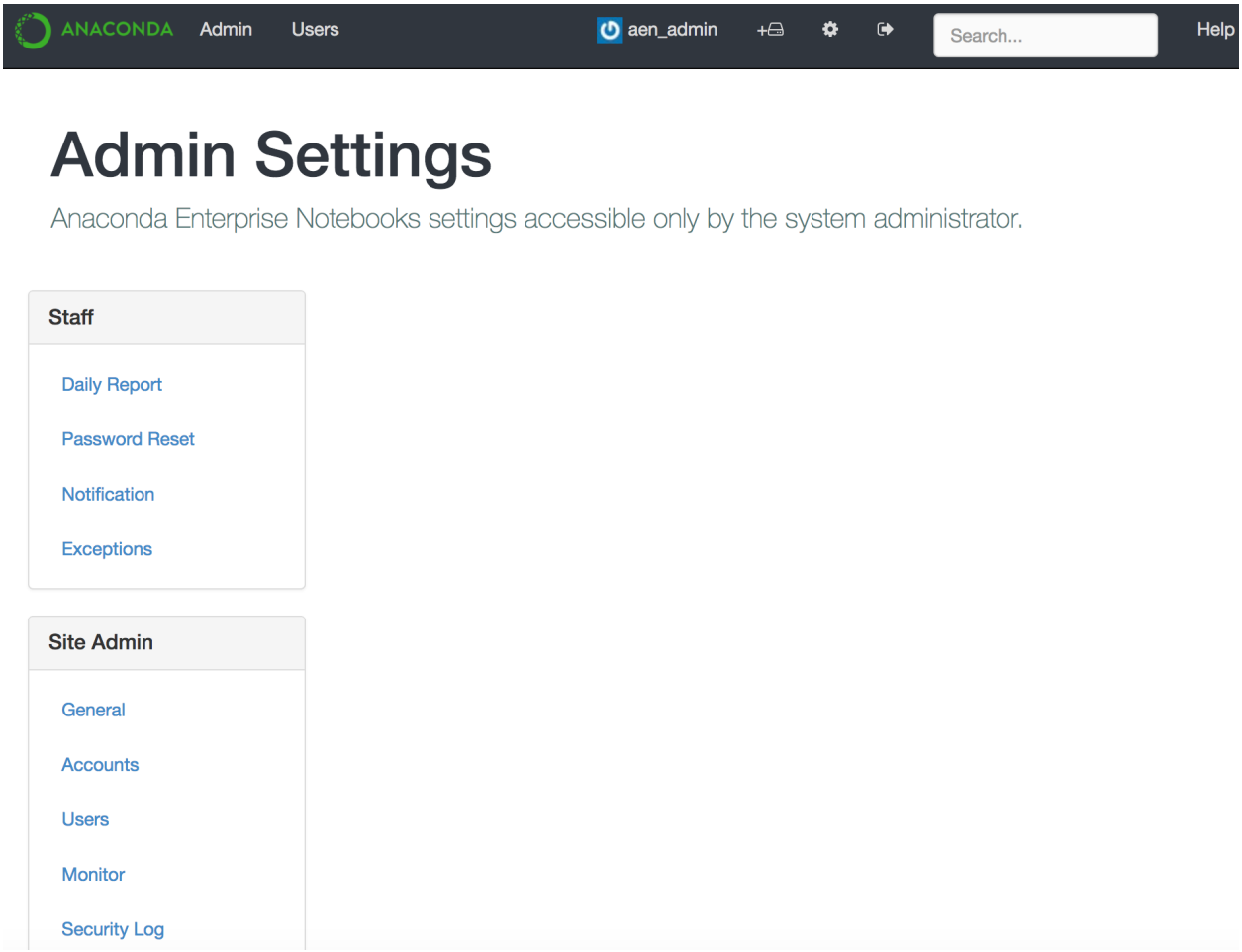
Admin guide

This administrator guide provides information about the administration of an AEN installation.

Most AEN system management is done from the administrative user interface (admin UI). Some advanced tasks are done *using the command line*.

Any AEN user account can be *upgraded to an administrator account* to have both user and administrator privileges.

Administrators see two additional links in the AEN Navigation bar—Admin and Users:



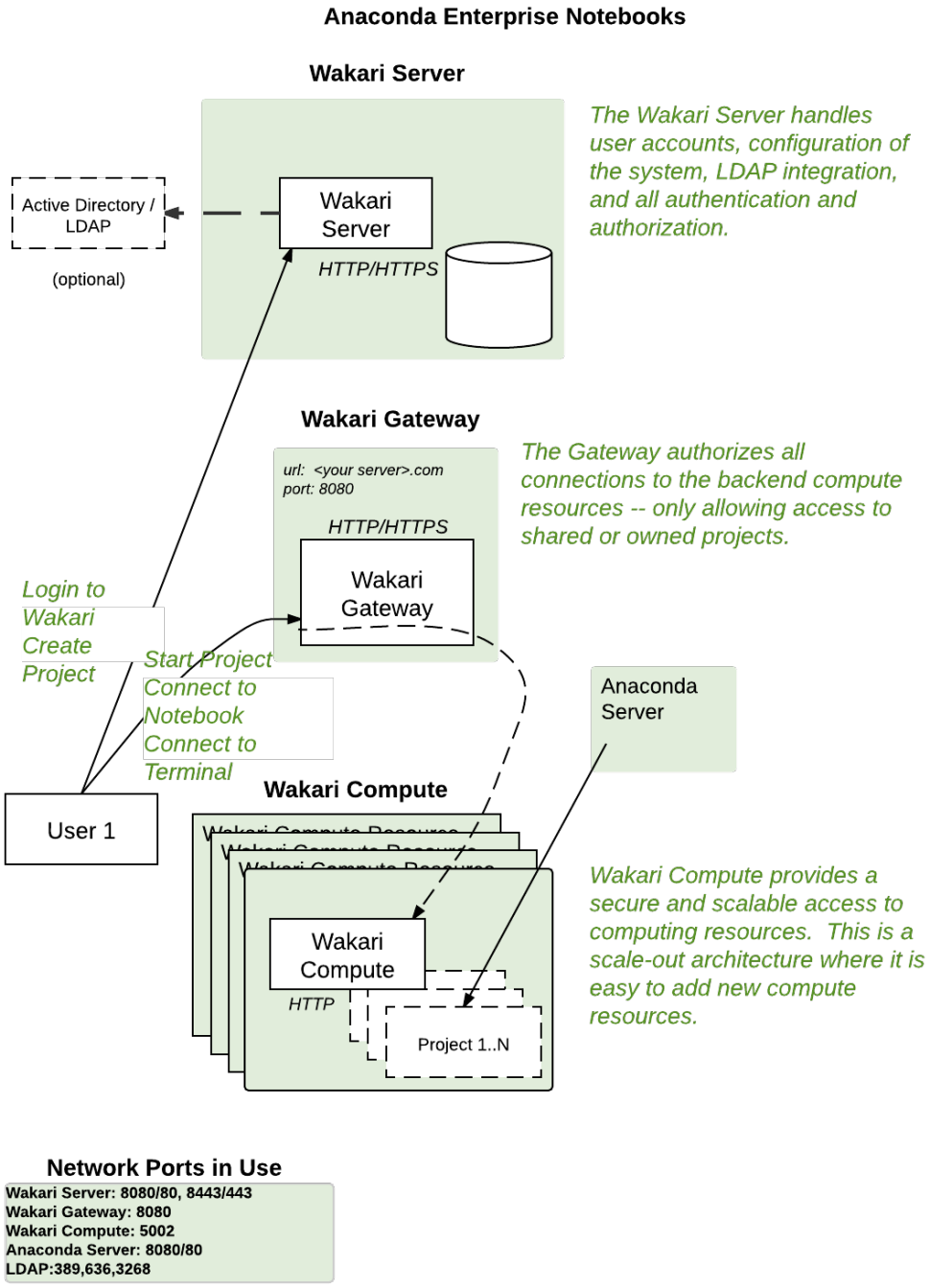
All of the other navigation bar items are the same as for a user account.

Concepts

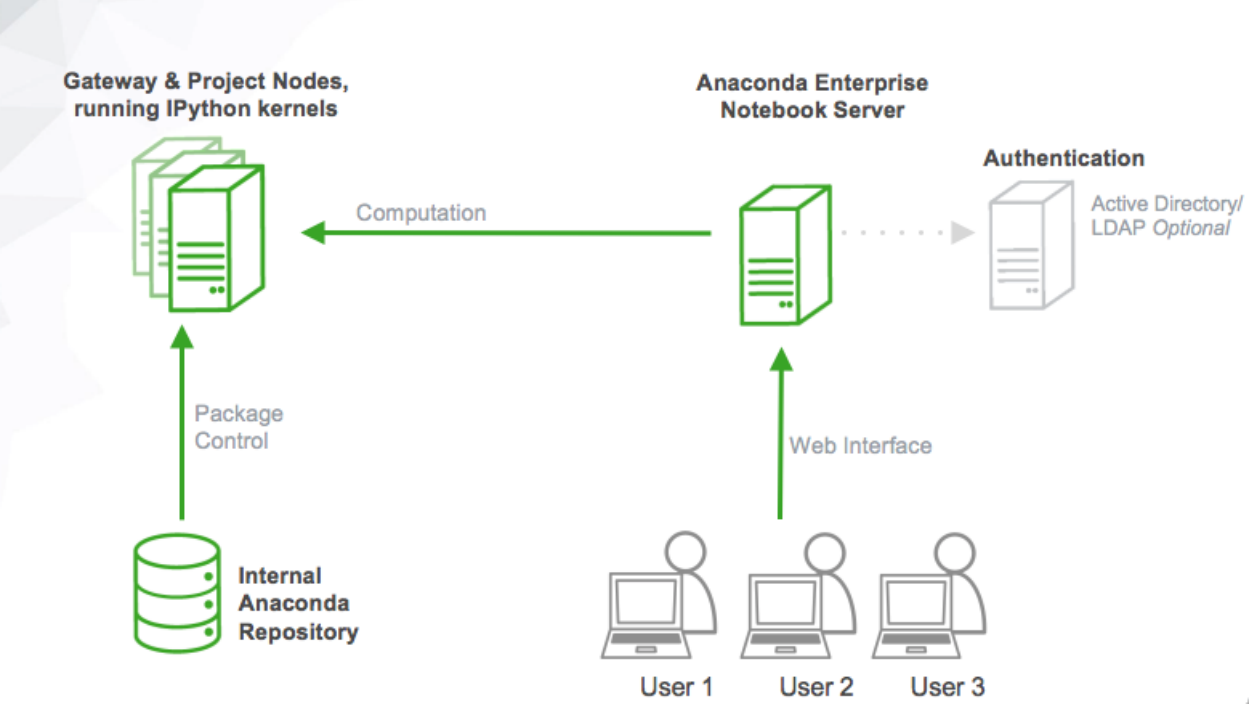
System overview

The Anaconda Enterprise Notebooks platform consists of 3 main service groups: AEN server, AEN gateway and AEN compute, which are called "nodes":

- *Server node*—The administrative front-end to the system where users login, user accounts are stored, and administrators manage the system.
- *Gateway node(s)*—A reverse proxy that authenticates users and directs them to the proper compute node for their project. Users will not notice this node after installation as it automatically routes them.
- *Compute nodes*—Where projects are stored and run.



These services can be run on a single machine or distributed across multiple servers.



Organizationally, each AEN installation has exactly 1 server instance and 1 or more gateway instances. Each compute node can only be connected to a single gateway. The collection of compute nodes served by a single gateway is called a **data center**. You can add data centers to the AEN installation at any time.

EXAMPLE: An AEN deployment with 2 data centers, where 1 gateway has a cluster of 20 physical computers, and the second gateway has 30 virtual machines, must have the following services installed and running:

- 1 AEN server instance
- 2 AEN gateway instances
- 50 AEN compute instances (20 + 30)

Nodes must be configured and maintained separately.

Server node

The server node controls login, accounts, admin, project creation and management as well as interfacing with the database. It is the main entry point to AEN for all users. The server node handles project setup and ensures that users are sent to the correct project data center.

Since AEN is web-based, it uses the standard HTTP port 80 or HTTPS port 443 on the server.

AEN uses MongoDB for its internal data persistency. It is typically run on the same host as the server but can also be *installed* on a separate host.

Server nodes use NGINX to handle the user-facing AEN web interface. NGINX acts as a request proxy for the actual server web-process which runs on a high numbered port that only listens on localhost. NGINX is also responsible for static content.

Server is installed in the `/opt/wakari/wakari-server` directory.

Server processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manage `wakari-worker`, multiple processes of `wk-server`.
user	`wakari`
configuration	`/opt/wakari/wakari-server/etc/supervisord.conf`
log	`/opt/wakari/wakari-server/var/log/supervisord.log`
control	`service wakari-server`
ports	none

wk-server	details
description	Handles user interaction and passing jobs on to the wakari gateway. Access to it is managed by NGINX.
user	`wakari`
command	`/opt/wakari/wakari-server/bin/wk-server`
configuration	`/opt/wakari/wakari-server/etc/wakari/`
control	`service wakari-server`
logs	`/opt/wakari/wakari-server/var/log/wakari/server.log`
ports	Not used in versions after 4.1.2 *

* AEN 4.1.2 and earlier use port 5000. This port is used only on localhost. Later versions of AEN use Unix sockets instead. The Unix socket path is: `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`

wakari-worker	details
description	Asynchronously executes tasks from `wk-server`.
user	`wakari`
logs	`/opt/wakari/wakari-server/var/log/wakari/worker.log`
control	`service wakari-server`

nginx	details
description	Serves static files and acts as proxy for all other requests passed to wk-server process. *
user	nginx
configuration	`/etc/nginx/nginx.conf` `/opt/wakari/wakari-server/etc/conf.d/www.enterprise.conf`
logs	`/var/log/nginx/woc.log` `/var/log/nginx/woc-error.log`
control	`service nginx status`
port	80

* In AEN 4.1.2 and earlier the wk-server process runs on port 5000 on localhost only. In later versions of AEN the wk-server process uses the Unix socket path `unix:/opt/wakari/wakari-server/var/run/wakari-server.sock`.

NGINX runs at least two processes:

- Master process running as root user.
- Worker processes running as nginx user.

Gateway node

The gateway node serves as an access point for a given group of compute nodes. It acts as a proxy service and manages the authorization and mapping of URLs and ports to services that are running on those nodes. The gateway nodes provide a consistent uniform interface for the user.

NOTE: The gateway may also be referred to as a data center because it serves as the proxy for a collection of compute nodes.

You can put a gateway in each data center in a tiered scale-out fashion.

AEN gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Gateway processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-gateway` process.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/supervisord.conf`
log	`/opt/wakari/wakari-gateway/var/log/supervisord.log`
control	`service wakari-gateway`
ports	none

wakari-gateway	details
description	Passes requests from the AEN Server to the Compute nodes.
user	`wakari`
configuration	`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`
logs	`/opt/wakari/wakari-gateway/var/log/wakari/gateway.application.log` `/opt/wakari/wakari-gateway/var/log/wakari/gateway.log`
working dir	/ (root)
port	8089 (webcache)

Compute node(s)

Compute nodes are where applications such as Jupyter Notebook and Workbench actually run. They are also the hosts that a user sees when using the Terminal app or when using SSH to access a node. Compute nodes contain all user-visible programs.

Compute nodes only need to communicate with a gateway, so they can be completely isolated by a firewall.

Each project is associated with one or more compute nodes that are part of a single data center.

AEN compute nodes are installed in the `/opt/wakari/wakari-compute` directory.

Each compute node in the AEN system requires a compute launcher service to mediate access to the server and gateway.

Compute processes

When you *view the status of server processes*, you may see the processes explained below.

supervisord	details
description	Manages the `wk-compute` process.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/supervisord.conf`
log	`/opt/wakari/wakari-compute/var/log/supervisord.log`
control	`service wakari-compute`
working dir	`/opt/wakari/wakari-compute/etc`
ports	none

wk-compute	details
description	Launches compute processes.
user	`wakari`
configuration	`/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` `/opt/wakari/wakari-compute/etc/wakari/scripts/config.json`
logs	`/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log` `/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.log`
working dir	`/` (root)
control	`service wakari-compute`
port	5002 (rfe)

Wk-compute loads each of the following configuration files, in this order:

- `/etc/wakari/config.json`.
- `/etc/wakari/compute-launcher-config.json`.
- `./compute-launcher-config.json`.
- Any configuration file specified by the `-c` option.

If an option is specified in multiple files, the last one encountered takes precedence.

Supervisor and supervisord

AEN uses a process control system called "Supervisor" to run its services. Supervisor is run by the AEN Service Account user, usually wakari or aen_admin.

The Supervisor daemon process is called "supervisord". It runs in the background and should rarely need to be restarted.

Service Account

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is `wakari`. Another popular choice is `aen_admin`.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

Anaconda environments

Each project has an associated conda environment containing the packages needed for that project. When a project is first started, AEN clones a default environment with the name "default" into the project directory.

Each release of AEN 4 includes specific tested versions of conda and the conda packages included with AEN. These tested conda packages include Python, R, and other packages, and these tested conda packages include all of the packages in Anaconda.

If you upgrade or install different versions of conda or different versions of any of these conda packages, the new packages will not have been tested as part of the AEN 4 release.

These different packages will usually work, especially if they are newer versions, but they are not tested or guaranteed to work, and in some cases they may break product functionality.

You can use a new conda environment to test a new version of a package before installing it in your existing environments.

If using conda to change the version of a package breaks product functionality, you can use conda to change the version of the package back to the version known to work.

For more information about environments, see *Working with environments*.

Projects and permissions

AEN users interact with the system predominantly through *projects*.

Projects are associated with a single data center within the AEN environment. The team of users includes one owner, which is the user that created the project.

Projects live in the `projectRoot` folder on the compute node—by default, `/projects`.

The project directory is created the first time a project is started. The `start-project` script clones it from `/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`.

Project directory permissions are:

```
owner: rwx, user who created the project
group: rwx, group of the owner
other: --x, to allow access to the Public folder
ACL: rwx for any other team members
```

Files and subdirectories within the project directory have the same permissions as the project directory, except:

- The public folder and everything in it are open to anyone.

- Any files hardlinked into the root anaconda environment—`/opt/wakari/anaconda`—are owned by the root or wakari users.

Project file and directory permissions are maintained by the `start-project` script. All files and directories in the project will have their permissions set when the project is started, except for files owned by root or the AEN_SRVC_ACCT user—by default, wakari or aen_admin.

The permissions set for files owned by root or the AEN_SRVC_ACCT user are not changed to avoid changing the permissions settings of any linked files in the `/opt/wakari/anaconda` directory.

CAUTION: Do not start a project as the AEN_SRVC_ACCT user. The permissions system does not correctly manage project files owned by this user.

Installation

Installation requirements

Hardware requirements

AEN server—At least:

- 2+GB RAM.
- 2+CPU cores.
- 20GB storage.

AEN gateway—At least:

- 2 GB RAM.
- 2 CPU cores.

AEN compute (N-machines)—Configured to meet the needs of the projects. At least:

- 2GB RAM.
- 2 CPU cores.
- 20 GB.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Software requirements

- RHEL/CentOS on all nodes. Versions from 6.5 through 7.4 are supported. Other operating systems are supported. However, this document assumes RHEL or CentOS.
- Linux home directories—Jupyter looks in $HOME for profiles and extensions.
- Ability to install in AEN directory `/opt/wakari` with at least 10 GB of storage.
- Ability to install in Projects directory `/projects` with at least 20 GB of storage. Size depends on number and size of projects.

NOTE: To install AEN in a different location see *Installing AEN in a custom location*.

Linux system accounts

Some Linux system accounts (UIDs) are added to the system during installation.

If your organization requires special actions, the following list is available:

- mongod (RHEL) or mongodb (Ubuntu/Debian)—created by the RPM or deb package.
- elasticsearch—created by RPM or deb package.
- nginx—created by RPM or deb package.
- AEN_SRVC_ACCT—created during installation of AEN, and defaults to wakari.
- ANON_USER—An account such as "public" or "anonymous" on the compute node.

  NOTE: If ANON_USER is not found, AEN_SRVC_ACCT will attempt to create it. If it fails, the project(s) will fail to start.
- ACL directories need the filesystem mounted with Posix ACL support (Posix.1e).

  NOTE: You can verify ACL from the command line by running `mount` and `tune2fs -l /path/to/filesystem | grep options`.

Software prerequisites

- AEN server:
  - Mongo—Greater than or equal to version 2.6.8 and less than or equal to version 3.4.14.
  - NGINX—Greater than or equal to version 1.12.2.
  - Elasticsearch—Greater than or equal to version 1.7.2.
  - Oracle JRE version 7 or 8.
  - bzip2.
- AEN Gateway:
  - bzip2.
- AEN compute:
  - git
  - bzip2
  - bash or zsh
  - X Window System

    NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

    ```
    sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
    dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
    fontpackages-filesystem
    ```

Security requirements

- Root or sudo access.
- File permissions: `umask 0022` is required during the installation.
- SELinux in permissive or disabled mode.

Edit the following file using either root or sudo access:

```
/etc/sysconfig/selinux
```

Edit the following:

```
# This file controls the state of SELinux on the system.
    # SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.

SELINUX=enforcing

# SELINUXTYPE= can take one of these two values:
    #     targeted - Targeted processes are protected,
    #     mls - Multi Level Security protection.

SELINUXTYPE=targeted
```

NOTE: You must reboot for the changes to take effect.

Verify changes with `getenforce`.

Network requirements

TCP Ports:

Direction	Type	Default Port	Protocol	Optional	Configurable	Comments
Inbound	TCP	80	HTTP or HTTPS	No	Yes	Server
Inbound	TCP	8089	HTTP or HTTPS	No	Yes	Gateway
Inbound	TCP	5002	HTTP	No	Yes	Compute

Other requirements

As long as the above requirements are met, there are no additional dependencies for AEN.

See also *system requirements for Anaconda Repository and Anaconda Scale*.

What's next

Prepare for installation.

Preparing for installation

Downloading AEN installers

Download the installers and copy them to the corresponding servers.

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/aen-server-4.2.2-Linux-x86_64.sh
curl -O $RPM_CDN/aen-gateway-4.2.2-Linux-x86_64.sh
curl -O $RPM_CDN/aen-compute-4.2.2-Linux-x86_64.sh
```

NOTE: The current $RPM_CDN server will be confirmed in an email provided by your sales rep.

NOTE: These instructions use *curl* or *wget* to download packages, but you may use other means to move the necessary files into the installation directory.

Gathering IP addresses or FQDNs

AEN is very sensitive to the IP address or domain name used to connect to the server and gateway nodes. If users will be using the domain name, you should install the nodes using the domain name instead of the IP addresses. The authentication system requires the proper hostnames when authenticating users between the services.

Print this page and fill in the domain names or IP addresses of the nodes below and record the user name and auto-generated password for the administrative user account in the box below after installing the AEN server node:

Node | Name or IP address	Port Number	Username | Password
AEN server |		
AEN gateway |		
AEN compute |		

NOTE: The values of these IP entries or DNS entries are referred to as `<AEN_SERVER_IP>` or `<AEN_SERVER_FQDN>`, particularly in examples of shell commands. Consider actually assigning those values to environment variables with similar names.

Set up variables

Certain variables need to have values assigned to them before you start the installation.

AEN server address

To define an environment variable for the AEN server address—FQDN or IP:

```
export AEN_SERVER=<AEN_SERVER_IP>  # <from table above>
```

NOTE: The address—FQDN or IP—specified for the AEN server must be resolvable by your intended AEN users' web clients.

To verify your hostname, run `echo $AEN_SERVER`.

AEN functional ID

AEN must be installed and executed by a Linux account called the AEN Service Account. The username of the AEN Service Account is called the AEN Functional ID (NFI). The AEN Service Account is created during AEN installation—if it does not exist—and is used to run all AEN services.

The default NFI username is wakari. Another popular choice is aen_admin.

To set the environment variable AEN_SRVC_ACCT to `wakari` or your chosen name before installation, run `export AEN_SRVC_ACCT="aen_admin"`.

This name is now the username of the AEN Service Account and of the AEN administrator account.

When upgrading AEN, set the NFI to the NFI of the current installation.

WARNING: The Service Account should only be used for administrative tasks, and should not be used for operating AEN the way an ordinary user would. If the Service Account creates or starts projects, the permissions on the AEN package cache will be reset to match the Service Account, which will interfere with the normal operation of AEN for all other users.

AEN functional group

The AEN Functional Group (NFG) may be given any name. Most often, it is set to `aen_admin` or `wakari`. This Linux group includes the AEN service account, so all files and directories that have the owner NFI also have the group NFG.

When upgrading AEN, set the NFG to the NFG of the current installation.

To set the NFG before installation, run:

```
export AEN_SRVC_GRP="<NFG>"
```

NOTE: Replace <NFG> with your NFG name.

AEN install sudo command

During AEN installation the installers perform various operations that require root level privileges. By default, the installers use the sudo command to perform these operations.

Before installation, set the AEN_SUDO_CMD_INSTALL environment variable to perform root level operations. You can also set it to no command at all if the user running the installer(s) has root privileges and the sudo command is not needed or is not available.

EXAMPLES:

```
export AEN_SUDO_CMD_INSTALL=""
export AEN_SUDO_CMD_INSTALL="sudo2"
```

AEN sudo command

By default the AEN services uses `sudo -u` to perform operations on behalf of other users—including `mkdir`, `chmod`, `cp` and `mv`.

To override the default sudo command when sudo is not available on the system, before installing, set the AEN_SUDO_CMD environment variable.

AEN must have the ability to perform operations on behalf of other users. Therefore, this environment variable cannot be set to an empty string or to `null`.

CAUTION: Any command that replaces AEN_SUDO_CMD must support the `-u` command line parameter—similarly to the sudo command.

EXAMPLE:

```
export AEN_SUDO_CMD="sudo2"
```

The optional environmental variable AEN_SUDO_SH is another way to customize AEN sudo operations. When AEN executes any sudo command, it will include the value of AEN_SUDO_SH, if it is set.

EXAMPLE: If your username is "jsmith" and the values are set as:

```
AEN_SUDO_CMD=sudo
OWNER=jsmith
AEN_SUDO_SH=sudologger
PROJECT_HOME=/projects/jsmith/myproj
```

Then AEN will resolve:

```
$AEN_SUDO_CMD -u ${OWNER} $AEN_SUDO_SH rm -rf $PROJECT_HOME
```

As:

```
sudo -u jsmith sudologger rm -rf /projects/jsmith/myproj
```

In this case the sudologger utility could be a pass-through utility that logs all sudo usage and then executes the remaining parameters.

Post-installation Sudo configuration

While root/sudo privileges are required during installation, root/sudo privileges are not required during normal operations after install, if user accounts are managed outside the software. However root/sudo privileges are required to start the services, thus in the service config files there may still need to be an AEN_SUDO_CMD entry.

For more information, see *Configuring sudo customizations*.

AEN remote database settings

By default AEN server uses a local database. To override the default database location, see *Install AEN connected to a remote Mongo DB instance*.

What's next

Install the AEN server.

Installing the AEN server

The AEN server is the administrative front end to the system. This is where users log in to the system, where user accounts are stored, and where admins can manage the system.

Server is installed in the `/opt/wakari/wakari-server` directory.

Installing the bzip2 package

Be sure you have the *bzip2* package installed. If this package is not installed on your system, install it:

```
sudo yum install bzip2
```

Downloading prerequisite RPMs

To install AEN on a CentOS 6 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.12.2-1.el6.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.8-1.x86_64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.2.noarch.rpm
curl -O $RPM_CDN/jre-8u65-linux-x64.rpm
```

To install AEN on a CentOS 7 server:

```
RPM_CDN="https://820451f3d8380952ce65-4cc6343b423784e82fd202bb87cf87cf.ssl.cf1.rackcdn.
↪com"
curl -O $RPM_CDN/nginx-1.12.2-1.el7_4.ngx.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-tools-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-shell-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-server-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-mongos-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/mongodb-org-2.6.12-1.x86_64.rpm
curl -O $RPM_CDN/jre-8u112-linux-x64.rpm
curl -O $RPM_CDN/elasticsearch-1.7.6.noarch.rpm
```

Installing prerequisite RPMs

Run:

```
sudo yum install -y *.rpm
sudo service mongod start
sudo chkconfig --add elasticsearch
```

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

Running the AEN server installer

Run:

```
sudo -E ./aen-server-4.2.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-server
Logging to /tmp/wakari_server.log
Checking server name
Ready for pre-install steps
Installing miniconda
...
...
Checking server name
Loading config from /opt/wakari/wakari-server/etc/wakari/config.json
Loading config from /opt/wakari/wakari-server/etc/wakari/wk-server-config.json


===================================

Created password '<RANDOM_PASSWORD>' for user 'aen_admin'

===================================


Starting Wakari daemons...
installation finished.
```

After successfully completing the installation script, the installer creates the administrator account—AEN_SRVC_ACCT user—and assigns it a password.

EXAMPLE:

```
Created password '<RANDOM_PASSWORD>' for user 'aen_admin'
```

TIP: Record this password. It will be needed in the following steps. It is also available in the installation log file `/tmp/wakari_server.log`.

Starting NGINX and Elasticsearch

When SELinux is enabled, it blocks NGINX from connecting to the socket created by Gunicorn. If you have SELinux enabled, run these commands to correct these permissions and allow connections between NGINX and Gunicorn:

```
sudo semanage fcontext -a -t httpd_var_run_t "/opt/wakari/wakari-server/var/run/wakari-
↪server.sock"
sudo restorecon -r /opt/wakari/wakari-server/var/run
```

To start NGINX and Elasticsearch to read the new config file:

```
sudo service nginx start
sudo service elasticsearch start
```

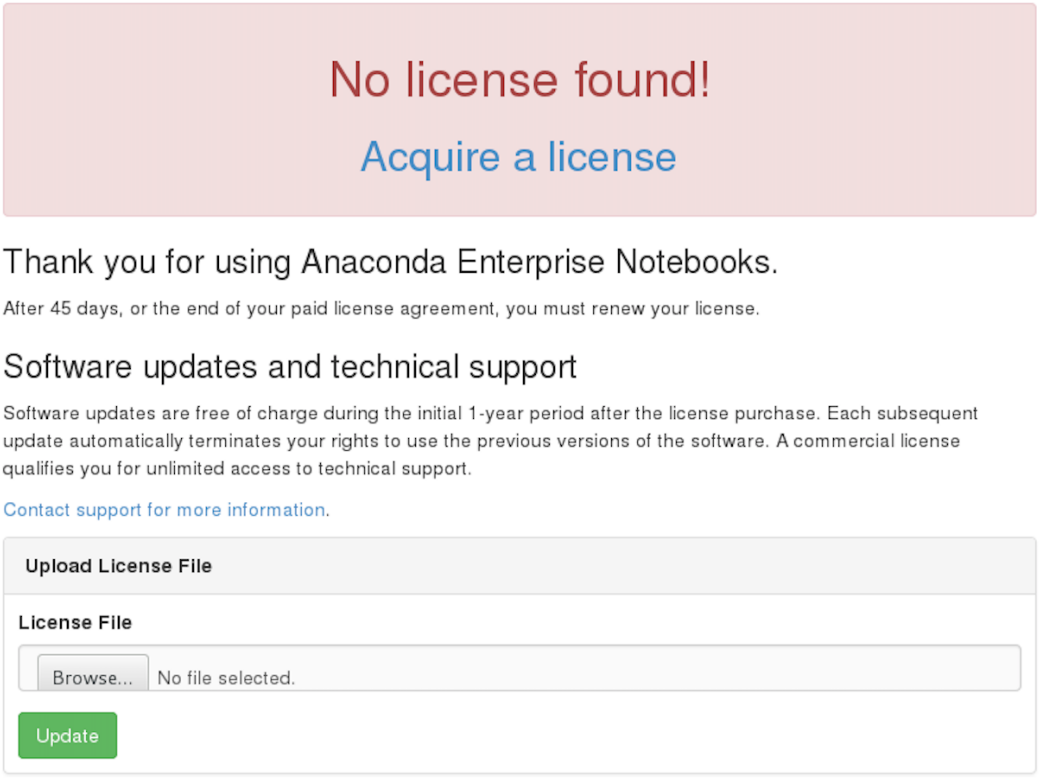
TIP: If the AEN web page shows an NGINX 404 error, restart NGINX:

```
sudo nginx -s stop
sudo nginx
```

Testing AEN server installation

Visit http://\protect\T1\textdollarAEN_SERVER.

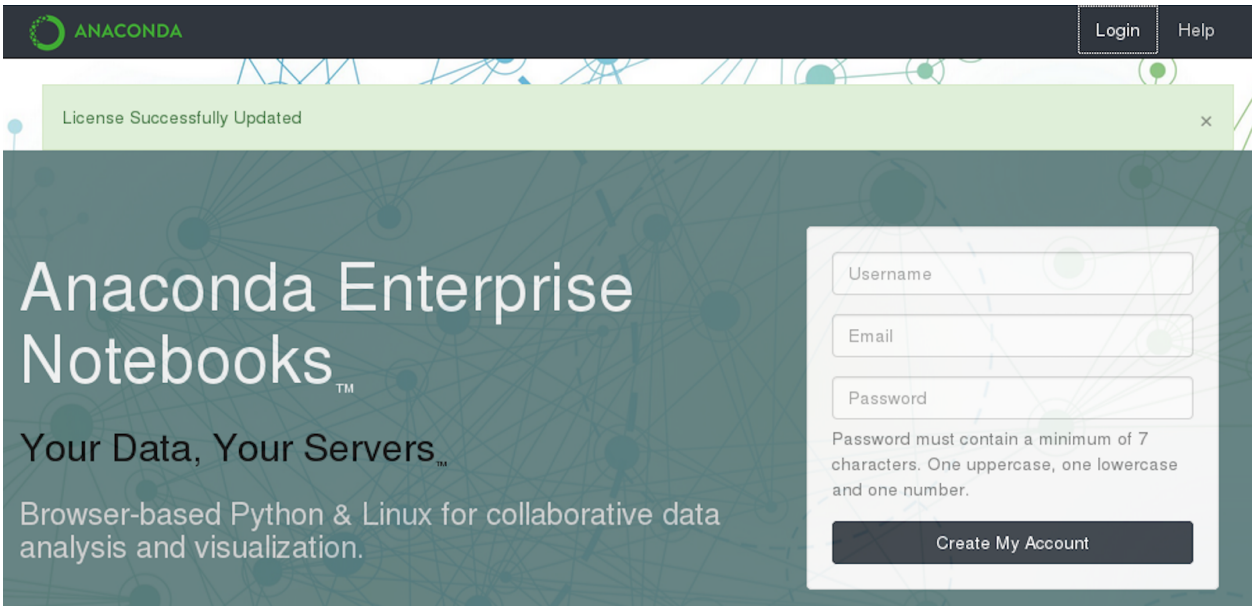
The License expired page is displayed.



Updating your license

From the License expired page, follow the onscreen instructions to upload your license file.

After your license is submitted, you will see this page:



What's next

Install the AEN gateway.

Installing the AEN gateway

The gateway is a reverse proxy that authenticates users and automatically directs them to the proper AEN compute node for their project. Users will not notice this node as it automatically routes them.

Gateway is installed in the `/opt/wakari/wakari-gateway` directory.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.2.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Registering your gateway

The gateway needs to register with the AEN server.

This needs to be authenticated, so the NFI user's credentials created during the AEN server install must be used.

To write the configuration file `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, run the following as sudo or root:

```
sudo /opt/wakari/wakari-gateway/bin/wk-gateway-configure \
--server http://$AEN_SERVER --host $AEN_GATEWAY \
--port $AEN_GATEWAY_PORT --name Gateway --protocol http \
--summary Gateway --username $AEN_SRVC_ACCT \
--password '<NFI USER PASSWORD>'
```

NOTE: replace `<NFI USER PASSWORD>` with the password of the NFI user that was generated during *server installation*.

Setting permissions

Run:

```
sudo chown $AEN_SRVC_ACCT /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
```

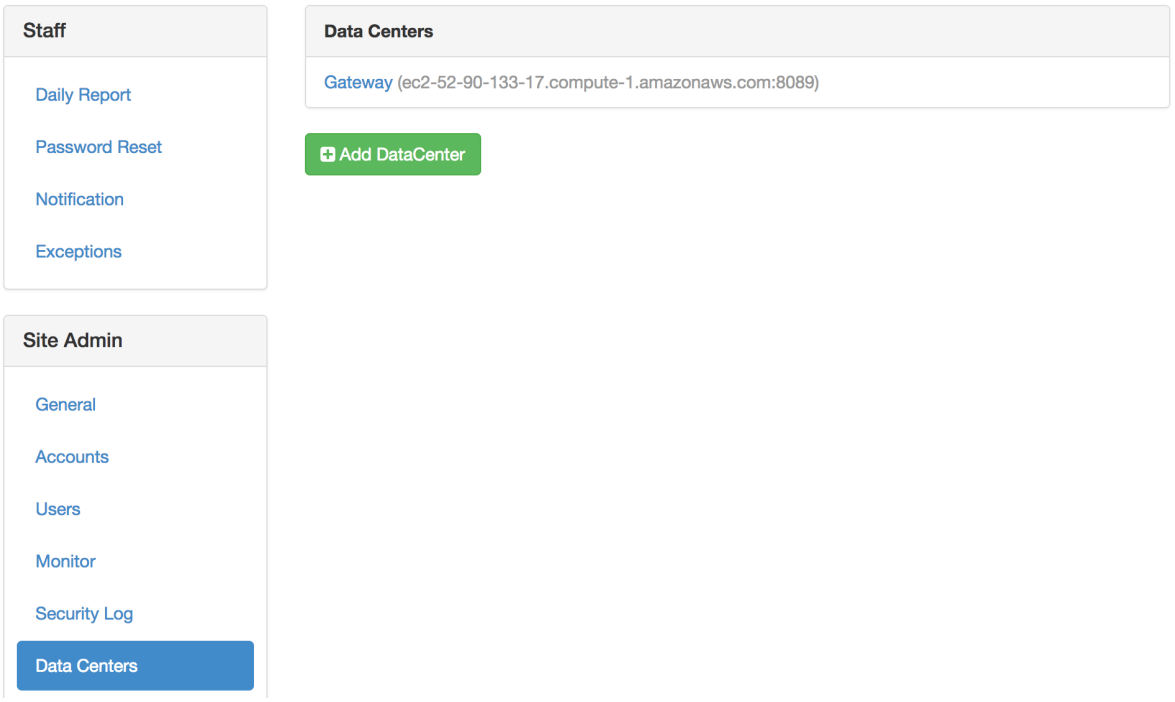
Starting the gateway

Run:

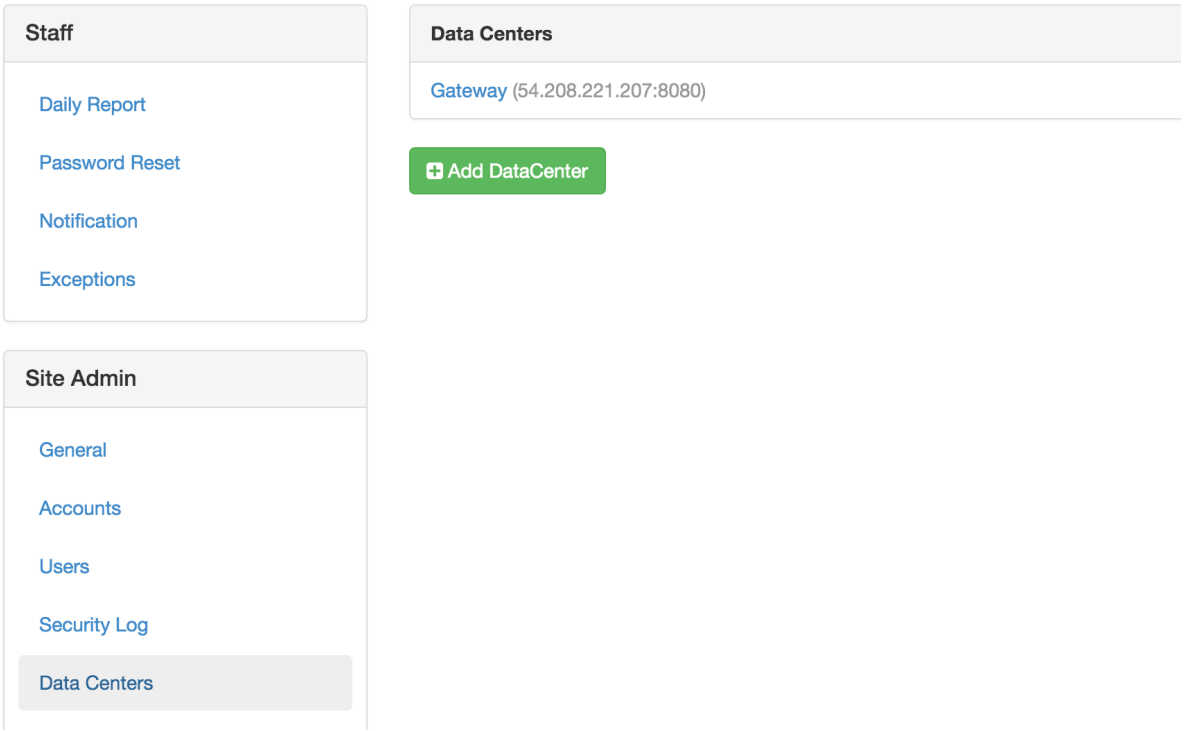
```
sudo service wakari-gateway start
```

Verifying your gateway registration

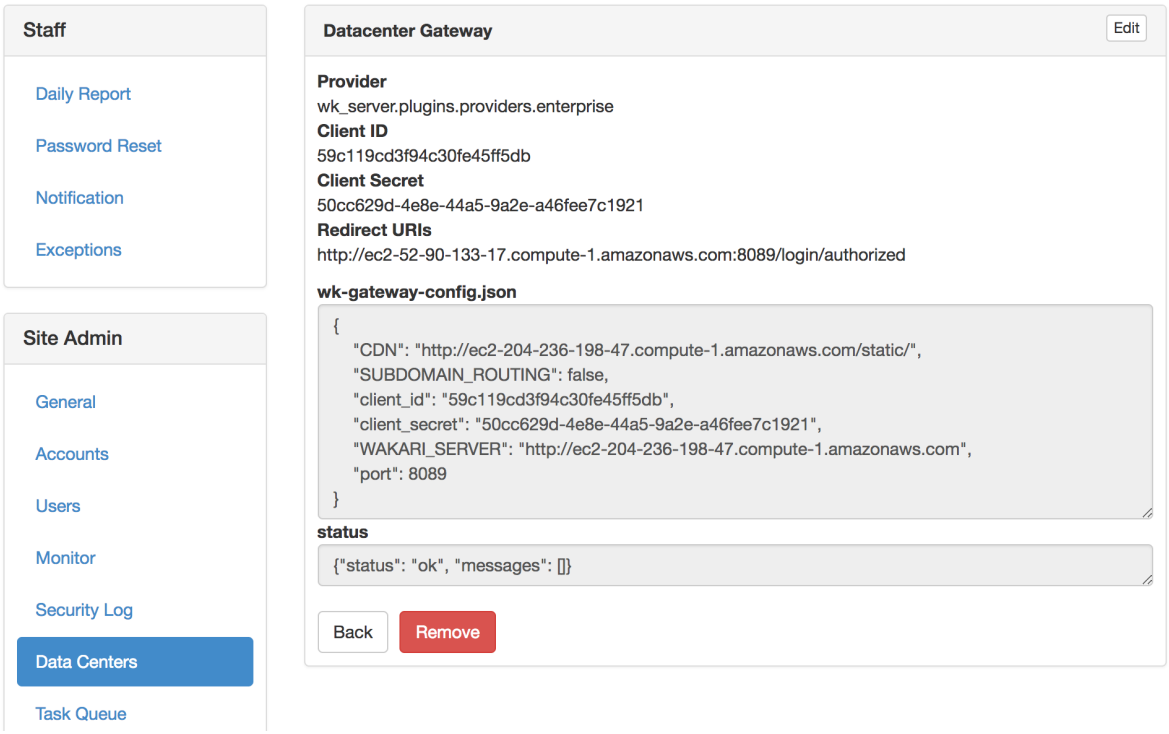
1. Log in to the AEN server using the Chrome or Firefox browser and the AEN_SRVC_ACCT user.
2. In the AEN navigation bar, click Admin to open the Admin Settings page.
3. In the **Site Admin** menu, select Data Centers:



4. Click your data center:



5. Verify that your data center is registered and the status is `{"status": "ok", "messages": []}`:



What's next

Install the AEN compute node(s).

Installing the AEN compute node(s)

Compute nodes are where projects are stored and run.

Adding multiple AEN compute machines allows you to scale-out horizontally to increase capacity. Projects can be created on individual compute nodes to spread the load.

Repeat this procedure on each compute machine.

Setting variables and changing permissions

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.2.2-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Restart the AEN Server

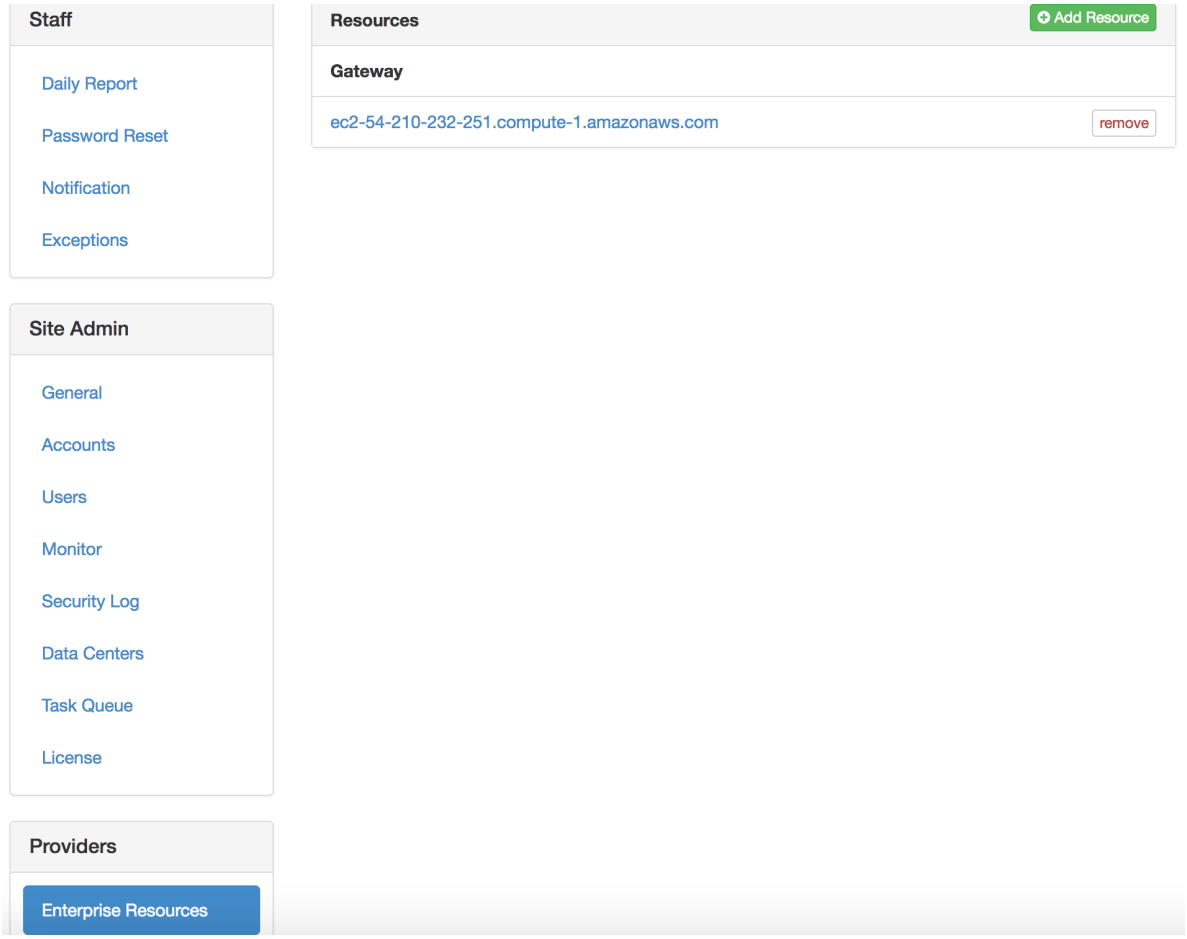
Once configured, restart the AEN server:

```
sudo service wakari-server restart
```

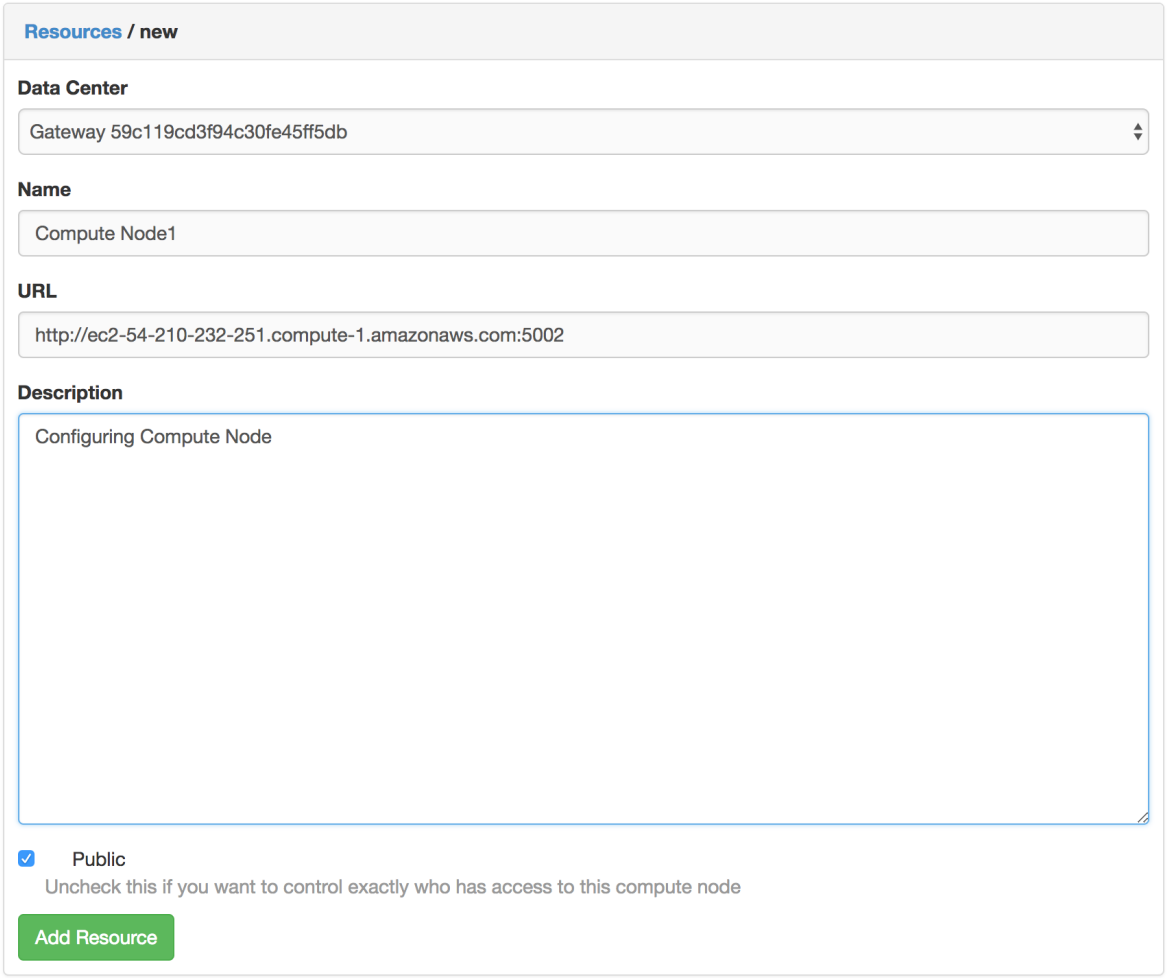
Configuring your compute node(s)

Once installed, you must configure the compute launcher on your server:

1. In your browser, go to your AEN server.
2. Log in as the AEN_SRVC_ACCT user.
3. In the AEN navigation bar, click Admin to open the Admin Settings page.
4. In the **Providers** menu, select Enterprise Resources:



5. Click the Add Resource button to open the new resource form.
6. Select the data center to associate this compute node with.



7. In the URL box, type: `http://$AEN_COMPUTE:5002`.

   NOTE: If the compute launcher is located on the same box as the gateway, we recommended that you type `http://localhost:5002` instead.

8. Type a Name and Description for the compute node.
9. Click the Add Resource button to save the changes.

Your AEN compute node is configured.

What's next

Configure conda to use your local on-site AEN repository.

Configuring conda to use your local on-site AEN repository

You can configure AEN to use a local on-site Anaconda Repository server instead of Anaconda.org.

To configure AEN to use a local on-site Repository, you must:

1. *Edit condarc on the compute node*.
2. *Configure the Anaconda client*.

Editing condarc on the compute node

NOTE: If there are channels that you haven't mirrored, you must remove them from the configuration.

Edit the file `.condarc` to match the following:

```
#/opt/wakari/anaconda/.condarc
channels:
    - defaults

create_default_packages:
    - anaconda-client
    - ipykernel

# Default channels is needed for when users override the system .condarc
# with ~/.condarc.  This ensures that "defaults" maps to your Anaconda Repository and not
# repo.continuum.io
default_channels:
    - http://<your Anaconda Repository name>:8080/conda/anaconda
    - http://<your Anaconda Repository name>:8080/conda/wakari
    - http://<your Anaconda Repository name>:8080/conda/r-channel

# Note:  You must add the "conda" subdirectory to the end
channel_alias: http://<your Anaconda Repository name:8080/conda
```

NOTE: Replace <your Anaconda Repository name> with the actual name or IP address of your local Anaconda Repository installation.

Configuring the Anaconda client

Anaconda client lets users work with Repository from the command-line—including searching for packages, logging in, uploading packages, and more.

To set the default configuration of anaconda-client for all users on your compute node:

```
sudo /opt/wakari/anaconda/bin/anaconda config --set url http://<your Anaconda Repository>
↪:8080/api -s
```

NOTE: Sudo is required because the configuration file is written to the root file system: `/etc/xdg/binstar/config.yaml`.

NOTE: Replace <`your Anaconda Repository`> with the actual name or IP address of your local Anaconda Repository installation.

What's next

Review the *optional configuration* tasks to see if any apply to your system.

Optional configuration

Using configuration files

The default locations for each component's configuration files are:

- Server—`/opt/wakari/wakari-server/etc/wakari/config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/config.json`.

Additionally, service-specific configuration files may also be present in the following locations:

- Server—`/opt/wakari/wakari-server/etc/wakari/wk-server-config.json`.
- Gateway—`/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`.
- Compute—`/opt/wakari/wakari-compute/etc/wakari/wk-compute-config.json`.

Each service loads each of the configuration files in the following order and updates the AEN configuration at each step:

1. `/etc/wakari/config.json`.
2. `/etc/wakari/wk-gateway-config.json`.
3. `/opt/wakari/wakari-SERVICE/etc/wakari/config.json`.
4. `/opt/wakari/wakari-SERVICE/etc/wakari/wk-SERVICE-config.json`.
5. `./config.json`.
6. `./wk-gateway-config.json`.

AEN configuration keys

The following is a list of AEN supported configuration keys:

Table 318: Server Configuration Keys

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
MONGO_DB	wakari	The name of the AEN database in mongodb.
MONGO_URL	mongodb://localhost/	The URL of your AEN server's mongodb instance. Format: mongodb://<username>:<password>@<host>:<port>/
WAKARI_SERVER		The URL of this AEN server.
DEFAULT_PRIVACY	public	The default project privacy setting—can be either public or private.
SESSION_COOKIE_NAM	wakari.enterprise.session	The Cookie name used to maintain Anaconda Enterprise Notebooks Enterprise login sessions.
PERMANENT_SESSION	True`	Sets cookie session to permanent. This will keep the session open after the browser is closed. The session will still expire after the number of minutes set in the SESSION_LIFETIME key.
SESSION_LIFETIME	120	Time in minutes until the session expires. The counter resets with each request.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
SMTP		Sets the SMTP email settings.
- host		A SMTP subkey—the SMTP mail server hostname.
- user		SMTP subkey—the username for SMTP server authentication.
- password		SMTP subkey—the password for SMTP server authentication.
- from_addr		SMTP subkey—the From address for emails sent through SMTP.
verify_gateway_certificate	true	A boolean setting that indicates whether your AEN server should verify the gateway SSL certificate.
accounts	wk_server.plugins.accounts.cloud	The account provider class. For LDAP, this should be set to wk_server.plugins.accounts.ldap_accounts.
uniqueEmail	true	A boolean setting that indicates whether unique user email addresses are required. See *note below* about updating the database when setting uniqueEmail.
has_internet	true	Boolean for retrieving the avatar from the gravatar URL. If false a local default is used instead.
LDAP	389	LDAP configurations.
- SERVER		LDAP subkey—A list of LDAP servers. At least one server name must be listed. The primary server should be listed first. All secondary or fail-over servers should be listed after the primary.
- PORT	389	LDAP subkey—The LDAP port on the LDAP server.
- AUTH_TYPE		LDAP subkey—LDAP Authentication types. simple—no encryption not secure.``TLS``–encrypted secure requires the TLS_CERT to be set.
- TLS_CERT		LDAP subkey—the full path to the TLS certificate file. The certificate file must also be provided by the Enterprise.
- BASEDN		LDAP subkey—the LDAP Base DN value.
- OU		LDAP subkey—a list of Organizational Units. Some Enterprises group users by OUs in their LDAP server records. AEN will loop over the list of OUs when authenticating a user. The OU value is a list of lists to support multiple OUs where each OU is a single name or a hierarchy of names.
ANON_USER	anonymous	Username—such as public or anonymous– assigned users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
SEARCH_ENABLED	true	Boolean indicating whether ElasticSearch is enabled.
SEARCH_SERVER	'localhost:9200'	IP address or domain name and port of ElasticSearch server
LOG_LEVEL	'DEBUG'	Log verbosity. One of: 'ERROR' 'WARN' 'INFO' 'DEBUG'

NOTE: If you set `uniqueEmail` to `false`, you must drop the existing index in the database. EXAMPLE: If the index name is `email_1`, run `db.users.dropIndex("email_1")`.

Table 319: Gateway Configuration Keys

Key	Default	Description
`WAKARI_SERVER`		The URL of the AEN `WAKARI_SERVER`.
`port`	8089	The Port number used by the gateway application. Must be a non-privileged port (>= 1024).
`client_id`		The client ID assigned to this gateway by the server during `wk-gateway-configure`.
`client_secret`		The Client secret assigned to this gateway by the server during `wk-gateway-configure`.
`httpTimeout`	600	Timeout in seconds. The default is 10 minutes to allow project creation.
`logLevel`	`info`	Log verbosity. One of: 'error' 'warn' 'info' 'debug'.
`https`		Enable SSL encryption. For more information, see *Configuring SSL*.
`- key`		A https subkey–Path to gateway key.
`- cert`		A https subkey–Path to gateway cert.
`- ca`		A https subkey–Required if cert was signed by a private root CA or signed by an intermediate authority. It must contain separate values for the paths to the CA root, any intermediates and the certificate for the Server.
`- passhphrase`		A https subkey–Passphrase required to decrypt SSL certs.

Table 320: Compute Node Configuration Keys

Key	Default	Description
WAKARI_SERVER		The URL of the AEN WAKARI_SERVER.
MANAGE_ACCOUNTS	true	A boolean setting that indicates whether AEN should manage system user accounts. Set to false for LDAP installations.
identicalGID	false	**To make the AEN compute service create groups with the same uid. Set to true If the** /projects folder resides on an NFSv3 volume. For more information, see *Group and user permissions for NFS*.
port	2227	The port number used by the compute-launcher application. Note that individual applications use dynamic ports.
projectRoot	/projects	The location of project file storage.
logLevel	info	Log verbosity. One of: 'error' 'warn' 'info' 'debug'
logMaxSize	10000000	Max size in bytes of the logfile. Default is 10 MB. If the size is exceeded then a new file is created and a counter will become a suffix of the log file.
logMaxFiles	30	Limit the number of files created when the size of the logfile is exceeded
appIdleTime	172800000 (48 hours)	The amount of idle time before applications will be auto-terminated (in msec).
idleCheckInterval	3600000 (1 hour)	The frequency of idle checks.
numericUsernames	false	A boolean setting that indicates whether numeric usernames are permitted.
httpTimeout	600	The time before a timeout—in seconds. The default is 10 minutes—600 seconds—to allow time for project creation.
ANON_USER	anonymous	Username such as public or anonymous for users who are not logged in to access projects. To disable public access use the special value disabled. For more information, see *Configuring sudo customizations*.
projDirsAsHome	false	A boolean setting. When false AEN apps use /home/<username> as HOME. When true AEN apps use /projects/<username> as HOME.

Table 321: Server Internal Configuration Keys - Do not change

Key	Default	Description
PROVIDERS	["wk_server.plugins.providers.enterprise"]	A list of compute provider classes.
MONGO_ACTION_LOG_SIZE	262144000	The size of the Mongo action log in bytes.
SITE_ADMINS		A list of site administrator email addresses—used for crash notifications and LDAP password reset requests.
FROM _EMAIL_ADDR		The From address for notification emails sent by AEN.
uniqueUserName	true	A boolean setting that indicates whether unique usernames are required.

Table 322: Gateway Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
SUBDOMAIN_ROUTING	false	A boolean that indicates whether subdomains are being used.
refreshTokenExpira	600000	Idle time in milliseconds before the Gateway session expires.

Table 323: Compute Node Internal Configuration Keys - Do not change

Key	Default	Description
CDN	$WAKARI_SERVER/static/	The location of static assets.
USE_SES	false	Sets whether AEN will use Amazon SES to send emails.
multiUser	true	A boolean that indicates whether multi-user support is enabled.
multiProject	true	A boolean that indicates whether multi-project support is enabled.
ANACONDA_ROOT	/opt/wakari/anaconda	The location of your Anaconda installation.
appLogs	/opt/wakari/wakari- compute/var/log/wakari/compute-launcher-a	The directory where application logs are stored.
appPIDs	/opt/wakari/wakari-compute/var/run/compute-launcher-a	The directory where application PID files are stored.
applicationLog	/opt/wakari/wakari-compute/var/log/wakari/compute-launcher.application.log	The path to the compute launcher log.
accessLog	opt/wakari/wakari-compute/var/log/wakari/compute-launcher.access.log	Path to compute launcher access log

Checking configuration file syntax

To verify that the configuration file contains valid JSON, run:

```
root@server  # python -m json.tool /opt/wakari/wakari-server/etc/wakari/*.json
root@gateway # python -m json.tool /opt/wakari/wakari-gateway/etc/wakari/*.json
root@compute # python -m json.tool /opt/wakari/wakari-compute/etc/wakari/*.json
```

If the file is correct, the contents are displayed.

If there is a syntax error in the file, a "No JSON object could be decoded" message is displayed instead.

To fix any errors, edit the configuration file and verify that it contains the correct JSON syntax.

Increasing HTTP timeout between gateway and compute nodes

The default HTTP timeout is 600 seconds (10 minutes).

This setting works for HTTP timeout only, not HTTPS.

To modify the HTTP timeout setting:

1. Open the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file and modify the httpTimeout key:

```
"httpTimeout": 600
```

2. Update the gateway node by modifying the httpTimeout key in the `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json` file to match the above settings.

3. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Installing AEN in a custom location

To install AEN in a custom location:

1. Make the custom install folder owned by `$AEN_SRVC_ACCT`. EXAMPLE: `/data/aen/`.
2. Make a symlink from `/opt/wakari` to `/data/aen`.
3. Run the installers.
4. Move the folder from `/projects` to your chosen custom location. EXAMPLE: `/data/aen/projects`.
5. Make a symlink from `/projects` to `/data/aen/projects`.

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda environment directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

Changing where projects are stored

NOTE: We recommend putting `/opt/wakari` and `/projects` on the same filesystem. If the project and conda env directories are on separate filesystems then more disk space will be required on compute nodes and performance will be worse.

To make aen-compute service use a different directory than `/projects` to store your AEN projects:

1. Modify the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file:

```
"projectRoot" : "/nfs/storage/services/wakari/projects",
```

   NOTE: The directory `/nfs/storage/services/wakari/projects` specified as `projectRoot` must already exist for this command to resolve properly.

2. Restart the AEN compute service:

```
sudo service wakari-compute restart
```

Group and user permissions for NFS

To install AEN with multiple compute nodes and a `/projects` folder on an NFSv3 volume, manually pre-create both the anonymous user and the `$AEN_SRVC_ACCOUNT` user on all nodes. Each of these users must have the same user identity number (UID) and group identity number (GID) on all nodes.

By default AEN creates local users with a different GID on each node. To make the AEN compute service create groups with the same GID:

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the identicalGID key value to `true`:

   ```
   , "identicalGID": true
   ```

   If you don't see the identicalGID key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using numeric usernames

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, change the numericUsernames key value to `true`.

   ```
   , "numericUsernames": true
   ```

   If you don't see the numericUsernames key, add it.

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Using project directories as home directories

The `projDirsAsHome` option changes the AEN home directories from the standard `/home/<username>` location to the project directories and the location `/projects/<username>/<project_name>/<username>/`. This ensures that AEN and AEN apps will not be affected by configuration files in a user's home directory, such as `.bashrc` or configuration files in subdirectories such as `.ipython` and `.jupyter`.

Package cache locations

AEN version 4.1.3 stores the cache of packages in `/home/<username>`, while AEN versions 4.2.0 and higher store the cache of packages in `/projects/<username>/<project_name>/<username>/`. By moving the package cache to the same filesystem as the project, AEN versions 4.2.0 and higher can use hardlinks and save disk space and time when creating or cloning environments.

These package cache locations are not affected by the `projDirsAsHome` option.

After upgrading from AEN 4.1.3 to AEN 4.2.0 or higher, existing projects will still use the package cache in `/home/<username>`. Do not remove this cache, or the existing projects will break.

When users create new projects or install packages, the newly installed packages will use the new cache location.

If you wish to remove the older package cache in `/home/<username>`:

- Upgrade AEN to 4.2.0 or higher.
- Use `conda remove` to remove every non-default package in every project.
- Use `conda install` to replace them. The replaced packages will link to the new package cache in `/projects/<username>/<project_name>/<username>/`.
- You can now safely remove the older package cache.

Enabling projDirsAsHome

NOTE: The `projDirsAsHome` option should be enabled immediately after performing the installation process and before any users have logged in to AEN. This ensures that users will not have home directories in different places due to some creating their home directories when the option was disabled and others creating their home directories when the option was enabled.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, add the `projDirsAsHome` key value and set it to `true`.

   ```
   , "projDirsAsHome": true
   ```

   NOTE: You must add the comma at the beginning of the line. If you add this line as the last key, you must remove any comma at the end of the line.

2. Restart the AEN compute service:

   ```
   sudo service wakari-compute restart
   ```

Setting up a default project environment

AEN includes a full installation of the Anaconda Python distribution—along with several additional packages—located within the root conda environment in `/opt/wakari/anaconda`.

The first time any new AEN project is started, this default project environment is cloned into the new project's workspace.

To configure a different set of packages than the default:

1. Create a new conda environment in the `/opt/wakari/anaconda/envs/default` directory.

   EXAMPLE: Using a Python 3.4 base environment, run:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/anaconda/envs/default python=3.4
```

2. Use conda to install any additional packages into the environment.
3. After the environment is created, clone it to ensure that it works correctly:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -p /opt/wakari/testenv --clone /opt/wakari/anaconda/envs/default
sudo -u $AEN_SRVC_ACCT rm -rf /opt/wakari/testenv
```

Converting an existing project

1. Run the following command to clone the environment:

```
sudo -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda \
    create -n /projects/owner/project/envs/<ENV_NAME> \
    --clone /opt/wakari/anaconda/envs/default
```

   NOTE: Replace /projects/owner/project/envs/<ENV_NAME> with the path to the new environment you would like to create within the project.

2. Open the *Compute Resource Configuration application* for your project and set the project environment path there as well.

Install AEN connected to a remote Mongo DB instance

To install AEN with a remote database:

1. Connect to the Mongodb instance and create the user for AEN:

```
> user = { user: "<username>",
  pwd: "<super-secure-password>",
  roles: [
    { role: "dbOwner", db: "<db_name>" },
    { role: "dbOwner", db: "<db_name>_mq" }
  ]
}
> db.createUser(user)
Successfully added user: { ... }
```

2. Before installing AEN-server export the database URL and name:

```
$ export MONGO_URL="mongodb://<username>:<password>@<host>:<port>/"
$ export MONGO_DB="<database_name>"
```

3. Continue the installation process: *Install the AEN server*.

Migrate from local to remote MongoDB

To configure your remote database to work with an already installed AEN server:

1. Stop the server, gateway and compute nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Open the `/opt/wakari/wakari-server/etc/wakari/config.json` file and create the MONGO_URL key. For the value parameter, add the database information.

   The final file should read:

```
{
  "MONGO_URL": "mongodb://MONGO-USER:MONGO-PASSWORD@MONGO-URL:MONGO-PORT",
  "MONGO_DB": "MONGO-DB-NAME",
  "WAKARI_SERVER": "http://YOUR-IP",
  "USE_SES": false,
  "CDN": "http://YOUR-IP/static/",
  "ANON_USER": "anonymous"
}
```

   For more information about configuration keys, see *Using configuration files*.

3. Migrate the data from the former database into the new one. For more information, see the MongoDB documentation website.

4. After migration, restart the nodes:

```
sudo service wakari-server start
sudo service wakari-gateway start
sudo service wakari-compute start
```

Running SELinux in enforcing mode

To run SELinux in Enforcing mode, a few ports must be set up using the `semanage port` command.

The `semange` command relies on `policycoreutils-python`. To install `policycoreutils-python`, if needed, run:

```
sudo yum -y install policycoreutils-python
```

Enable ports 9200 and 9300 for Elasticsearch:

```
sudo semanage port -a -t http_port_t -p tcp 9200
sudo semanage port -a -t http_port_t -p tcp 9300
```

Changing server hostnames

It is possible to change the domain names (hostnames) of the various AEN nodes by updating the configuration files.

NOTE: After the configuration files are updated, the associated nodes need to be restarted.

To edit the information for all of the data centers that you are changing the base domain name for:

1. Go to the Site Admin section of the Admin Settings page.
2. In the Data Centers section, click the Edit button.
3. Make any necessary updates.

   NOTE: This must include the service port if it is different from the default—80 for HTTP and 443 for HTTPS.
4. In the Enterprise Resources sub-section of the Providers section, edit each compute node that has a changed domain name.

   NOTE: These URLs should include the protocol, hostname and port.

Authenticating with LDAP

Anaconda Enterprise Notebooks performs local authentication against accounts in the AEN database by default.

To configure AEN to authenticate against accounts in an LDAP (Lightweight Directory Access Protocol) server, follow the instructions below.

Installing OpenLDAP libraries

The system needs OpenLDAP libraries to be installed and accessible by AEN. AEN uses the OpenLDAP libraries to establish an LDAP connection to your LDAP servers.

To install OpenLDAP on CentOS or Redhat:

```
sudo yum install openldap
```

To install OpenLDAP on Ubuntu or Debian, follow the official OpenLDAP installation instructions.

Configuring OpenLDAP

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://openldap.EXAMPLE.COM",
        "BIND_DN": "cn=Bob Jones,ou=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "DC=EXAMPLE,DC=COM",
                        "filter": "(| (& (ou=Payroll)
                                         (uid=%(username)s))
                                      (& (ou=Facilities)
                                         (uid=%(username)s)))"
```

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```
                        },
        "KEY_MAP": {"username": "uid",
                    "email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your OpenLDAP server. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—The level at which you want to start the search.
  - filter—The default is to search for the sAMAccountName attribute, and use its value for the AEN server username field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

  NOTE: Map the `uid` attribute in LDAP to the `username` attribute in AEN server to preserve username capitalization.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring Active Directory

Microsoft Active Directory is a server program that provides directory services and uses the open industry standard Lightweight Directory Access Protocol (LDAP).

To enable Active Directory support:

1. Open the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file.
2. Add the following LDAP settings:

```
{
    "accounts":"wk_server.plugins.accounts.ldap2",
    "LDAP" : {
        "URI": "ldap://<ad.EXAMPLE.COM>",
        "BIND_DN": "CN=Bind User,CN=Users,DC=EXAMPLE,DC=COM",
        "BIND_AUTH": "secretpass",
        "USER_SEARCH": {"base": "CN=Users,DC=EXAMPLE,DC=COM",
                        "filter": "sAMAccountName=%(username)s"
        },
        "KEY_MAP": {"username": "sAMAccountName",
```

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```
                    "email": "mail",
                    "name": "cn"
        }
    }
}
```

- URI—The IP address or hostname of your Active Directory server. Replace <ad.EXAMPLE.COM> with the actual URI. For SSL/TLS, use the `ldaps://` prefix and specify a TLS_CACERT as described in the SSL/TLS configuration section below.
- BIND_DN—The full directory path of the user you want AEN server to bind as.
- BIND_AUTH—The password of the BIND_DN user.
- USER_SEARCH:
  - base—the level at which you want to start the search.
  - filter—default is to search for the sAMAccountName attribute, and use its value for the AEN server `username` field.
- KEY_MAP—Maps user attributes in AEN server to LDAP user attributes.

  EXAMPLE: The `mail` attribute in LDAP maps to the `email` attribute in AEN server.

  NOTE: Map the `sAMAccountName` attribute in LDAP to the `username` attribute in AEN server to preserve username capitalization.

3. Restart AEN server to load new settings.
4. Log in with the admin account. This creates the admin user in the local database.
5. As soon as LDAP is installed, LDAP authentication takes over, so you need to add your admin account again:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add "jsmith"
```

Configuring SSL/TLS

AEN uses system-wide LDAP settings, including SSL/TLS support.

- On Redhat/CentOS systems, these settings are located in the `/etc/openldap/ldap.conf` file.
- On Ubuntu/Debian systems, these settings are located in the `/etc/ldap/ldap.conf` file.

Typically, the only configuration necessary is updating the file to read:

```
TLS_CACERT /path/to/CA.cert
```

NOTE: `CA.cert` is the Certificate Authority used to sign the LDAP server's SSL certificate. In the case of a self-signed SSL certificate, this is the path to the SSL certificate itself.

Testing LDAP configuration

Test your LDAP configuration using `flask-ldap-login-check`:

```
/opt/wakari/wakari-server/bin/flask-ldap-login-check \
    wk_server.wsgi:app \
    -u [username] \
    -p [password]
```

NOTE: `username` is the username of a valid user and `password` is that user's BIND_AUTH password.

Configuring sudo customizations

If your organization's IT security policy does not allow root access or has restrictions on the use of sudo, after AEN installation, you may customize AEN to meet their requirements.

Your organization may choose to implement any or all of the following:

- *Remove root access* for AEN service account (Note: this restricts AEN from managing user accounts).
- *Configurable sudo command*.
- *Restrict sudo access to all processes*.

These customizations must be done in a terminal window after copying the files to the server node.

Removing all root access from the service account

Because root access is required for `useradd`, the following process restricts AEN from managing user accounts.

1. Modify the `/etc/sudoers.d/wakari_sudo` file to read:

   ```
   Defaults:wakari !requiretty, visiblepw
   Runas_Alias    OP = ALL,!root
   wakari ALL=(OP) NOPASSWD: ALL
   ```

   NOTE: If you used a service account name other than wakari, enter that name instead of `wakari`.

2. Modify the `/opt/wakari/wakari-compute/etc/wakari/config.json` file to read:

   ```
   "MANAGE_ACCOUNTS": false,
   ```

Using this option means that your IT department must create and manage all user accounts at the OS level.

After an OS-level account exists, you may create on the main AEN web page an AEN account using the same name. The password you choose is not linked in any way to the OS-level password for the account.

Alternatively, you can configure the system to *use LDAP for authenticating users*.

Allowing public users to have access to your AEN projects

A public account is visible to anyone who can access the AEN server. The name of this account can be configured to any name you wish. For example, `public` or `anonymous`. To disable this feature use the special value `disabled`.

1. In the `/opt/wakari/wakari-compute/etc/wakari/wk-compute-launcher-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

2. Restart AEN compute node:

```
sudo service wakari-compute restart
```

3. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify the ANON_USER line to read:

```
"ANON_USER": "public"
```

4. Restart AEN server:

```
sudo service wakari-server restart
```

For more information about configuration keys, see *Using configuration files*.

Using a sudo alternative

You can use a sudo alternative as long as it supports the same execution semantics as the original sudo. The alternative must be configured to give the service account permission to run commands on behalf of AEN users.

1. In your terminal window, open the `/opt/wakari/wakari-compute/etc/wakari/config.json` file.
2. Modify the AEN_SUDO_CMD line to read:

```
"AEN_SUDO_CMD": "/path/to/alternative/sudo",
```

   NOTE: If the alternate sudo command is available on PATH, then the full path is not required.

Restricting sudo access to a single gatekeeper

By default, sudoers is configured to allow AEN to run any command as a particular user which allows the platform to initiate processes as the logged-in end user. If more restrictive control is required, it should be implemented using a suitable sudoers policy. If that is not possible or practical, it is also possible to route all AEN ID-changing operations through a single gatekeeper.

This gatekeeper wraps the desired executable and provides an alternate way to log, monitor, or control which processes can be initiated by AEN on behalf of a user.

CAUTION: Gatekeeper is a special case configuration and should only be used if required.

To configure an AEN gatekeeper:

1. Modify the `/etc/sudoers.d/wakari_sudo` file to contain:

```
Defaults:wakari !requiretty, visiblepw
Runas_Alias    OP = ALL,!root
wakari ALL=(OP) NOPASSWD: /path/to/gatekeeper
```

2. In the `/opt/wakari/wakari-compute/etc/wakari/config.json` file, modify the AEN_SUDO_SH line to read:

```
"AEN_SUDO_SH": "/path/to/gatekeeper"
```

EXAMPLE: The gatekeeper can be as simple as a script with contents such as:

```
#!/bin/bash
first_cmd=$1
if [ 'bash' == $1 ]; then
    shift
    export HOME=~
    export SHELL=/bin/bash
    export PATH=$PATH:/opt/wakari/anaconda/bin
    bash "$@"
else
    exec $@
fi
```

Configuring SSL

The server node uses NGINX to proxy all incoming http(s) requests to the server running on a local port, and uses NGINX for SSL termination. The default setup uses http—non-SSL—since cert files are required to configure SSL and each enterprise will have their own cert files.

The `www.enterprise.conf` file is the default `nginx.conf` file used for AEN. It is copied to the `/etc/nginx/conf.d` directory during server installation.

NOTE: This section describes setting up SSL after your gateway node has been installed and registered with the server node.

Copying the required files

To configure SSL on AEN, you will need the following files:

- Server certificate and key
- Server CA bundle
- Gateway certificate and key
- Gateway CA bundle

Configure SSL on AEN:

1. Copy the Gateway certificate and key to `/opt/wakari/wakari-gateway/etc/` on the Gateway as `gateway.crt` and `gateway.key`.
2. Copy the Gateway CA bundle to `/opt/wakari/wakari-server/etc/` on the Server.
3. Copy the Server certificate and key to `/etc/nginx` on the Server as `server.crt` and `server.key`.
4. Copy the Server CA bundle to `/opt/wakari/wakari-gateway/etc/` on the Gateway.

If you have a certificate that was signed by a private root CA and/or an intermediate authority:

- The Gateway CA bundle must contain the full chain: root CA, any intermediate authority and the certificate.

```
cat gateway.crt intermediate.crt root.crt >> gatway-crt-int-root.crt
```

- The Server CA bundle must be separated into individual files for the root CA, any intermediate and the certificate.

Configuring SSL on the server node

The `www.enterprise.https.conf` is an NGINX configuration file for SSL. It is set up to use the `server.crt` and `server.key` cert files.

CAUTION: You must change these values to point to the signed cert files for your domain.

NOTE: Self-signed certs or those signed by a private root CA require additional configuration.

Perform the following steps as root:

1. Stop NGINX:

```
service nginx stop
```

2. Move the `/etc/nginx/conf.d/www.enterprise.conf` file to a backup directory.
3. Copy the `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.https.conf` file to `/etc/nginx/conf.d`.

   NOTE: `/etc/nginx/conf.d` may have `www.enterprise.conf` or `www.enterprise.https.conf` but it may not have both.
4. Edit the `/etc/nginx/conf.d/www.enterprise.https.conf` file and change the `server.crt` and `server.key` values to the names of the real cert and key files if they are different.
5. Restart NGINX by running:

```
service nginx start
```

6. Update the WAKARI_SERVER and CDN settings to use https instead of http in the following configuration files:

```
/opt/wakari/wakari-server/etc/wakari/config.json
/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json
/opt/wakari/wakari-compute/etc/wakari/config.json
```

7. Copy the gateway certificate, `gateway.crt` to `/opt/wakari/wakari-server/etc/`.
8. In an editor, open `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` and add:

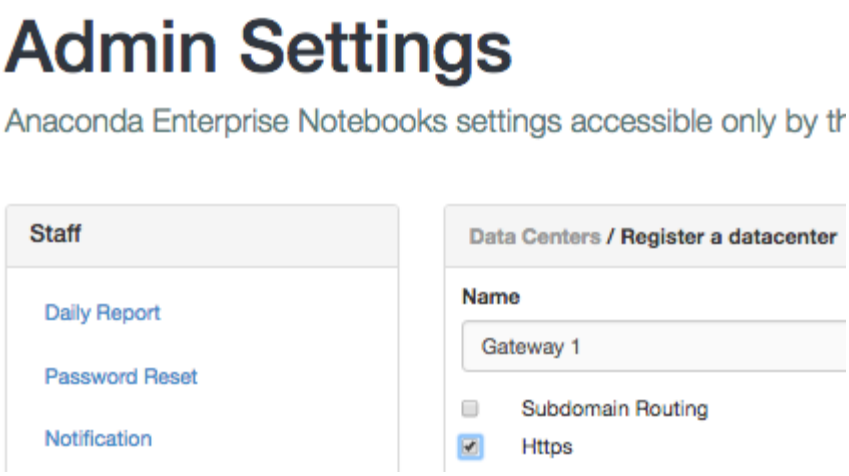
```
"verify_gateway_certificate": "/opt/wakari/wakari-server/etc/gateway.crt"
```

9. Restart AEN services on the server by running:

```
service wakari-server restart
```

   NOTE: This step may return an error since the gateway has not yet been configured for SSL.

10. In AEN, verify that the browser uses https. On the Admin Settings page, under Data Centers, click Gateway, then select https:



Configuring SSL on the gateway

1. For all types of SSL certificates, in `/opt/wakari/wakari-gateway/etc/wakari/wk-gateway-config.json`, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt"
    }
}
```

2. For a server certificate signed by a private root CA or signed by an intermediate authority, add:

```
{
    EXISTING_CONFIGURATION,
    "https": {
        "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
        "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
        "ca": ["/opt/wakari/wakari-gateway/etc/server.crt"]
    }
 }
```

NOTE: When the certificate chain has more than one intermediate cert signed by a higher root CA authority, you must manually break up the certs in the chain into individual files, and enumerate them in the `ca` key:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "ca": ["/opt/wakari/wakari-gateway/etc/server1.crt",
              "/opt/wakari/wakari-gateway/etc/server2.crt",
              "/opt/wakari/wakari-gateway/etc/server3.crt"]
    }
 }
```

3. For a gateway certificate that is encrypted using a passphrase, add:

```
{
   EXISTING_CONFIGURATION,
   "https": {
       "key": "/opt/wakari/wakari-gateway/etc/gateway.key",
       "cert": "/opt/wakari/wakari-gateway/etc/gateway.crt",
       "passphrase": "mysecretpassphrase"
    }
 }
```

NOTE: Alternatively, the passphrase can be passed using an environment variable or entered when the wakari-gateway service is manually started.

EXAMPLES:

```
# using an environment variable
AEN_GATEWAY_SSL_PASSPHRASE='mysecretpassphrase' wk-gateway
```

```
# starting wakari-gateway manually
sudo service wakari-gateway start --ask-for-passphrase
Passphrase?
```

4. Restart the gateway:

```
sudo service wakari-gateway restart
```

Configuring SSL on compute nodes

Anaconda Enterprise does not support direct SSL on Compute Nodes. If you need SSL on Compute Nodes, you must install each Compute Node on the same server as a Gateway using `http://localhost:5002` for the URL value while adding it as a resource, and you must use a Gateway for each and every Compute Node.

Security reminder

The permissions on the cert files must be set correctly to prevent them from being read by others. Since NGINX is run by the root user, only the root user needs read access to the cert files.

EXAMPLE: If the cert files are called `server.crt` and `server.key`, then use the root account to set permissions:

```
chmod 600 server.key
chmod 600 server.crt
```

Enabling or disabling the Strict-Transport-Security header

By default, Strict-Transport-Security (STS) is enabled in the `www.enterprise.https.conf` file:

```
add_header Strict-Transport-Security max-age=31536000;
```

It can remain enabled if either of the following is true:

- The gateway is running on a different host than the server.

  or

- SSL has been enabled for the gateway.

You must comment out this line if both of the following are true:

- The gateway is running on the same host as the server.

  and

- SSL has not been enabled for the gateway.

Leaving STS enabled when these conditions are true will cause a mismatch in protocols between the server and gateway, causing your apps to fail to launch correctly.

Configuring single sign-on

AEN's single sign-on (SSO) capability creates a new authentication provider that defers to your Anaconda Repository for login and authentication cookies.

To enable SSO:

1. Deploy AEN and Repository on the same machine.
2. In the `/opt/wakari/wakari-server/etc/wakari/config.json` file, add:

   ```
   {
   EXISTING_CONFIGURATION,
   "SECRET_KEY": "<repo signing secret>",
   "REPO_LOGIN_URL":
      "http://example_repo.com:8080/account/login?next=http://example_repo.com/"
   }
   ```

3. Copy the `SECRET_KEY` from the Repository configuration file.
4. In the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` file, modify:

   ```
   {
   EXISTING_CONFIGURATION,
   "accounts": "wk_server.plugins.accounts.repo",
   }
   ```

5. If you are using Repository version 2.33.3 through 2.33.10, set `USE_SERVER_BASED_SESSIONS: false` in the Repository configuration.

   This setting affects the network security properties of AEN and Repository. Specifically, if `USE_SERVER_BASED_SESSIONS` is set to `false`, and if a new cross-site scripting (XSS) vulnerability is discovered, it could expose an additional server fixation vulnerability. Please discuss this with your Anaconda representative and be sure the feature is compatible with your network requirements before setting `USE_SERVER_BASED_SESSIONS: false`.

6. To activate the changes restart `wakari-server`:

```
sudo service wakari-server restart
```

SSO is enabled.

Adding a third-party extension

Anaconda officially supports and tests functionality of the default environment(s) only for those extensions that ship with AEN.

It is possible to add third-party and custom extensions from conda-forge or pip, but doing so may cause instability in your default project environments or kernels.

CAUTION: Anaconda does not officially support third-party extensions. This section is informational only.

Installing unofficial Jupyter Notebook extensions for AEN

TIP: Always back up and verify your complete system before installing extensions.

The jupyter-contrib-nbextensions extensions are installed on a compute node.

The default conda executable directory for AEN is `/opt/wakari/anaconda/bin/conda`. If you are installing a Jupyter extension, it must be installed in the `wakari-compute` directory.

EXAMPLE: Run:

```
/opt/wakari/anaconda/bin/conda install -p /opt/wakari/wakari-compute/ -c conda-forge␣
↪jupyter_contrib_nbextension
```

For more information, see Unofficial Jupyter Notebook Extensions.

Configure search indexing

For search indexing to work correctly, verify that the AEN Compute node can communicate with the AEN Server.

```
curl -m 5 $AEN_SERVER > /dev/null
```

There must be at least one `inotify` watch available for the number of subdirectories within the project root filesystem. Some Linux distributions default to a low number of watches, which can prevent the search indexer from monitoring project directories for changes.

```
cat /proc/sys/fs/inotify/max_user_watches
```

If necessary, increase the number of max user watches with the following command:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

There must be at least one `inotify` user instance available per project.

```
cat /proc/sys/fs/inotify/max_user_instances
```

If necessary, this can be increased with the following command:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo sysctl -p
```

Create custom Jupyter kernel for Pyspark

These instructions add a custom Jupyter Notebook option to allow users to select PySpark as the kernel.

Install Spark

The easiest way to install Spark is with Cloudera CDH.

You will use YARN as a resource manager. After installing Cloudera CDH, install Spark. Spark comes with a PySpark shell.

Create a notebook kernel for PySpark

You may create the kernel as an administrator or as a regular user. Read the instructions below to help you choose which method to use.

1. As an administrator

Create a new kernel and point it to the root env in each project. To do so create a directory 'pyspark' in */opt/wakari/wakari-compute/share/jupyter/kernels/*.

Create the following kernel.json file:

```
{"argv": ["/opt/wakari/anaconda/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

You may choose any name for the 'display_name'.

This configuration is pointing to the python executable in the root environment. Since that environment is under admin control, users cannot add new packages to the environment. They will need an admin to help update the environment.

2. As an administrator without IPython profile

To have an admin level PySpark kernel without the user .ipython space:

```
{"argv":
["/opt/wakari/wakari-compute/etc/ipython/pyspark.sh", "-f", "{connection_file}"],
"display_name":"PySpark",  "language":"python" }
```

NOTE: The pyspark.sh script is defined in *Without IPython profile* section below.

3. As a regular user

Create a new directory in the user's home directory: *.local/share/jupyter/kernels/pyspark/*. This way the user will be using the default environment and able to upgrade or install new packages.

Create the following kernel.json file:

```
{"argv": ["/projects/<username>/<project_name>/envs/default/bin/python",
 "-m", "ipykernel", "-f", "connection_file}", "--profile", "pyspark"],
 "display_name":"PySpark",  "language":"python" }
```

NOTE: Replace "<username>" with the correct user name and "<project_name>" with the correct project name.

You may choose any name for the 'display_name'.

Create an IPython profile

The above profile call from the kernel requires that we define a particular PySpark profile. This profile should be created for each user that logs in to AEN to use the PySpark kernel.

In the user's home, create the directory and file `~/.ipython/profile_pyspark/startup/00-pyspark-setup.py` with the file contents:

```
import os
import sys

# The place where CDH installed spark, if the user installed Spark locally it can be␣
↪changed here.
# Optionally we can check if the variable can be retrieved from environment.

os.environ["SPARK_HOME"] = "/usr/lib/spark"

os.environ["PYSPARK_PYTHON"] = "/opt/wakari/anaconda/bin/python"

# And Python path
os.environ["PYLIB"] = os.environ["SPARK_HOME"] + "/python/lib"
sys.path.insert(0, os.environ["PYLIB"] +"/py4j-0.9-src.zip")  #10.4-src.zip")
sys.path.insert(0, os.environ["PYLIB"] +"/pyspark.zip")

os.environ["PYSPARK_SUBMIT_ARGS"] = "--name yarn pyspark-shell"
```

Now log in using the user account that has the PySpark profile.

Without IPython profile

If it is necessary to avoid creating a local profile for the users, a script can be made to be called from the kernel. Create a bash script that will load the environment variables:

```
sudo -u $AEN_SRVC_ACCT mkdir /opt/wakari/wakari-compute/etc/ipython
sudo -u $AEN_SRVC_ACCT touch /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
sudo -u $AEN_SRVC_ACCT chmod a+x /opt/wakari/wakari-compute/etc/ipython/pyspark.sh
```

The contents of the file should look like:

```
#!/usr/bin/env bash
# setup environment variable, etc.

export PYSPARK_PYTHON="/opt/wakari/anaconda/bin/python"
export SPARK_HOME="/usr/lib/spark"

# And Python path
export PYLIB=$SPARK_HOME:/python/lib
export PYTHONPATH=$PYTHONPATH:$PYLIB:/py4j-0.9-src.zip
export PYTHONPATH=$PYTHONPATH:$PYLIB:/pyspark.zip

export PYSPARK_SUBMIT_ARGS="--name yarn pyspark-shell"

# run the ipykernel
exec /opt/wakari/anaconda/bin/python -m ipykernel $@
```

Using PySpark

When creating a new notebook in a project, now there will be the option to select PySpark as the kernel. When creating such a notebook you'll be able to import pyspark and start using it:

```
from pyspark import SparkConf
from pyspark import SparkContext
```

NOTE: You can always add those lines and any other command you may use frequently in the PySpark setup file `00-pyspark-setup.py` as shown above.

Upgrading AEN

CAUTION: These instructions are for upgrading AEN to the current version 4.2.2 from 4.2.1 ONLY. Each version must be upgraded iteratively from the previous version. Do not skip versions.

Upgrade instructions for previous versions:

- *AEN 4.2.1 upgrade instructions*
- *AEN 4.2.0 upgrade instructions*
- *AEN 4.1.3 upgrade instructions*
- *AEN 4.1.2 upgrade instructions*

For upgrades from versions before those listed above, please contact your enterprise support representative.

NOTE: Named Service Account functionality is available with AEN 4.0.0+ for new installations only. It is not available for upgraded installations. Contact your enterprise support representative for more information.

An AEN platform update requires that each instance of the 3 node types be upgraded individually:

- AEN Server
- AEN Gateway
- AEN Compute

The upgrade process requires that all AEN service instances be stopped, upgraded, and then restarted.

NOTE: Any commands that call for the root user can also be done using sudo.

If you encounter any difficulty during the upgrade process, see *Troubleshooting* which provides guidance on:

- processes
- configuration files
- log files
- ports

If you are unable to resolve an installation or upgrade problem, please contact your enterprise support representative.

Before you upgrade

CAUTION: Make a tested backup of your installation before starting the upgrade. Upgrading to a higher version of AEN is not reversible. Any errors during the upgrade procedure may result in partial or complete data loss and require restoring data from backups.

CAUTION: Terminate all AEN applications and stop all projects before starting the upgrade process.

Before upgrading each service on each host:

1. Suspend the services on each of the nodes:

```
sudo service wakari-server stop
sudo service wakari-gateway stop
sudo service wakari-compute stop
```

2. Set the AEN Functional ID ("NFI") and AEN Functional Group ("NFG") to the NFI and NFG of the current installation:

```
export AEN_SRVC_ACCT="wakari"
export AEN_SRVC_GRP="wakari"
```

   NOTE: The default NFI is `wakari`, but `aen_admin` or any other name may be used instead.

   For more information on NFI and NFG, see the *installation instructions*.

3. Install `wget`:

```
yum install wget
```

Upgrading the AEN server node

NOTE: If you are using LDAP-based authentication, back up the `/opt/wakari/wakari-server/etc/wakari/wk-server-config.json` configuration file. After the server has been upgraded, copy that file back into the same location as before the upgrade.

Complete the following steps on the server host:

1. Stop the Elasticsearch service:

```
sudo service elasticsearch stop
```

2. Remove any previous index:

```
sudo rm -rf /var/lib/elasticsearch/*
```

NOTE: You can choose to keep the old index, but if you detect any issues with the search capabilities after the upgrade, you will need to run the following to start with a clean index:

```
sudo service wakari-server stop
sudo service elasticsearch stop
sudo rm -rf /var/lib/elasticsearch/*
sudo service elasticsearch start
sudo service wakari-server start
```

3. Upgrade the server:

```
pushd /tmp
wget http://j.mp/aen-server-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-server          \
                --file aen-server-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                 -p /opt/wakari/wakari-server          \
                 --no-deps                              \
                 wakari-enterprise-server-conf-update=2.0.9
popd
```

4. Start Elasticsearch:

```
sudo service elasticsearch start
```

Or, if you do not want to use the search features, edit your server's `/opt/wakari/wakari-server/etc/wakari/config.json` file by adding the line `"SEARCH_ENABLED": false`.

5. Restart the *NGINX* server:

AEN server version >= 4.1.3 uses Unix sockets for communication with NGINX. Restart NGINX to load this new configuration:

```
sudo service nginx restart
```

Alternatively, you can restart NGINX with:

```
sudo nginx -s stop
sudo nginx
```

6. Start the server:

```
sudo service wakari-server start
```

7. Check that the server is running properly:

```
sudo service wakari-server status
```

8. If you see NGINX errors, please check the configuration at `/opt/wakari/wakari-server/etc/nginx/conf.d/www.enterprise.conf:18`.

9. Connect to AEN server using your web browser with the correct protocol (http or https), hostname and port number.

Upgrading the AEN gateway node

Complete the following steps on each gateway host:

1. Upgrade the gateway:

```
pushd /tmp
wget http://j.mp/aen-gateway-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --file aen-gateway-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/miniconda/bin/conda install \
                -p /opt/wakari/wakari-gateway         \
                --no-deps                             \
                wakari-enterprise-gateway-conf-update=2.0.9
popd
```

2. Start the gateway:

```
sudo service wakari-gateway start
```

3. Check that the gateway is running properly:

```
sudo service wakari-gateway status
```

4. Connect to the gateway using your web browser with the correct http/https, hostname and port number.

Upgrading AEN compute nodes

Complete the following steps on each host where an AEN compute service is running:

1. Check for any `wakari-indexer` processes running:

```
ps aux | grep wakari-indexer
```

NOTE: If you stopped all the projects, you will not see any wakari-indexer processes running.

Terminate any remaining `wakari-indexer` processes:

```
sudo killall wakari-indexer
```

NOTE: The processes killed with `killall` are run by the $AEN_SRVC_ACCT user, so they can be killed as root with `sudo killall` or killed as the $AEN_SRVC_ACCT user with `sudo -u $AEN_SRVC_ACCT killall`. Example commands show the `sudo killall` option.

2. Check for any AEN applications processes running—Workbench, Viewer, Terminal or Notebook:

```
ps aux | grep wk-app-gateone
ps aux | grep wk-app-workbench
ps aux | grep wk-app-viewer
ps aux | grep wk-app-terminal
ps aux | grep jupyter-notebook
```

NOTE: If you stopped all the projects, you will not see any AEN app processes running.

Terminate any remaining AEN application processes by running one or more of the following:

```
sudo killall wk-app-gateone
sudo killall wk-app-workbench
sudo killall wk-app-viewer
sudo killall wk-app-terminal
sudo killall jupyter-notebook
```

3. Verify the contents of `/opt/wakari/anaconda/.condarc`. Modify it to contain the following entries, and possibly others if you customized the `.condarc` file.

   NOTE: Modify the file as the AEN_SRVC_ACCT user (or be sure to keep the same ownership).

```
channels:
  - https://conda.anaconda.org/t/<TOKEN>/anaconda-nb-extensions
  - r
  - https://conda.anaconda.org/wakari
  - defaults

create_default_packages:
  - anaconda-client
  - ipykernel
```

   NOTE: Contact your enterprise support representative to get your token for the Anaconda channel referenced above. Replace <TOKEN> with the actual token from your enterprise support representative.

4. Upgrade *Anaconda* in the root environment:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
             -p /opt/wakari/anaconda              \
             --file aen-anaconda-update-4_2_2
popd
```

5. Upgrade each compute service:

```
pushd /tmp
wget http://j.mp/aen-compute-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
               -p /opt/wakari/wakari-compute        \
               --file aen-compute-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
               --no-deps                            \
               -p /opt/wakari/wakari-compute        \
               wakari-enterprise-compute-conf-update=2.0.13
popd
```

   NOTE: When upgrading the wakari-compute environment, you may see ImportError warnings with some nbextensions. As long as the Validating message is OK, the ImportError warnings are harmless—a consequence of the post-link presence on those packages.

6. Initialize the root environment to prime the package cache:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenv \
                --clone root
```

7. Test the offline cloning step:

```
sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda create \
                -p /opt/wakari/testenvoffline \
                --clone root --offline
```

8. Remove the test environments:

```
sudo rm -rf /opt/wakari/testenv
sudo rm -rf /opt/wakari/testenvoffline
```

9. Install necessary dependencies:

   NOTE: Skip this step if you already have these dependencies installed from previous installations.

```
sudo yum groupinstall "X Window System" -y
sudo yum install git -y
```

   NOTE: If you don't want to install the whole X Window System, you must install the following packages to have R plotting support:

```
sudo yum install -y libXrender libXext libXdmcp libSM libICE libXt \
dejavu-sans-fonts dejavu-serif-fonts dejavu-fonts-common \
fontpackages-filesystem
```

10. Start the compute service:

```
sudo service wakari-compute start
```

11. Verify the compute service is running properly:

```
sudo service wakari-compute status
```

12. Restart the AEN Server with:

```
sudo service wakari-server restart
```

13. Repeat this upgrade procedure for all compute nodes in your Data Center.

After upgrading

1. Restart the projects and start using AEN applications.
2. If you have a *customized default environment*, you may choose to upgrade it depending on the needs of your users.

   Upgrade the customized default environment at `/opt/wakari/anaconda/envs/default` with the `$AEN_SRVC_ACCT` user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_2_2

sudo -E -u $AEN_SRVC_ACCT /opt/wakari/anaconda/bin/conda install \
        -p /opt/wakari/anaconda/envs/default \
        --file aen-anaconda-update-4_2_2
popd
```

To upgrade the customized default environments for every user and every project at `/projects/<USER>/<PROJECT>/envs/default`, run these commands for **every** user as that user:

```
pushd /tmp
wget http://j.mp/aen-anaconda-update-4_2_2

sudo -E -u <USER> /opt/wakari/anaconda/bin/conda install \
        -p /projects/<USER>/<PROJECT>/envs/default \
        --file aen-anaconda-update-4_2_2
popd
```

NOTE: Replace `<USER>` with the user's name. Replace `<PROJECT>` with the project name.

NOTE: Upgrading the default environment at `/opt/wakari/anaconda/envs/default` does NOT automatically upgrade the default environment in the users pre-existing projects. For pre-existing projects, the upgrade, if requested, should be done on a per-user basis.

NOTE: These commands update packages listed in `aen-anaconda-update-4_2_2` and do not update any other package.

3. If you did not stop all your projects before upgrading, then the first time you start an application you will see an error page requesting that you restart the application.
4. Restart the application to complete the upgrade.
5. If you still see old applications or icons after restart, reload the page to reset the browser cache.

Uninstalling AEN

Each AEN node must be uninstalled separately.

Begin by setting the AEN Functional ID (NFI). The NFI is the username of the AEN Service Account which is used to run all AEN services and is also the username of the AEN Admin account. The NFI may be any name. The default NFI is `wakari`. The NFI is also often set to `aen_admin`. The NFI (and AEN Functional Group or NFG) are described in *the installation instructions*.

Set the NFI with this command:

```
export AEN_SRVC_ACCT="aen_admin"
```

Replace the name `aen_admin` with the NFI that was set in your installation of Anaconda Enterprise Notebooks.

Uninstalling a server node

To remove a server node, run the following commands as root or sudo on the server node's host system:

1. Stop the server processes:

```
service wakari-server stop
```

2. Stop MongoDB:

```
service mongod stop
```

3. Remove AEN server software, AEN database files and NGINX configuration:

```
rm -Rf /opt/wakari/wakari-server
rm -Rf /opt/wakari/miniconda
rm -Rf /var/lib/mongo/wakari*
rm -Rf /etc/nginx/conf.d/www.enterprise.conf
```

   NOTE: Remove `/etc/nginx/conf.d/www.enterprise.https.conf` if SSL is enabled on the Server node.

4. Restart MongoDB and NGINX:

```
service mongod restart
service nginx restart
```

5. Check for any outstanding server processes and stop them:

```
ps -ef | grep -e wakari-server -e wk-server
```

6. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

7. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a gateway node

To uninstall a gateway node, run the following commands as root or sudo on the gateway host system:

1. Stop the gateway processes:

```
service wakari-gateway stop
```

2. Remove gateway software:

```
rm -Rf /opt/wakari/wakari-gateway
```

3. Check for any outstanding gateway processes and stop them:

```
ps -ef | grep -e wakari-gateway -e wk-gateway
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

Uninstalling a compute node

To remove a compute node, run the following commands as root or sudo on each compute node host system:

1. Stop the compute processes:

```
service wakari-compute stop
```

2. Remove the compute software:

```
rm -Rf /opt/wakari/wakari-compute
rm -Rf /opt/wakari/miniconda
rm -Rf /opt/wakari/anaconda
```

3. Check for any outstanding compute processes and stop them:

```
ps -ef | grep -e wakari-compute -e wk-compute
```

4. Remove the AEN Service Account:

```
userdel $AEN_SRVC_ACCT
```

5. Check for and remove any references to "aen" or "wakari" from the root user's `.condarc` file:

```
grep -i aen ~/.condarc
grep -i wakari ~/.condarc
```

OPTIONAL: Removing projects from compute nodes

CAUTION: This is an extreme measure and is not necessary in most instances. We recommend you create and verify a backup before doing this or any other file removal.

To remove all AEN projects from all of your compute nodes:

```
rm -Rf /projects
```

This is a step-by-step guide to installing an Anaconda Enterprise Notebooks system comprised of a front-end server, a gateway and compute machines.

If you have any questions about these instructions or you encounter any issues while installing AEN, please contact your sales representative or Priority Support team.

When you have completed the installation process, review the *optional configuration tasks* to see if any are appropriate for your system.

Distributed install

In a distributed install the server and gateway run on separate hosts.

Single-box install

In a single-box install, both the server and the gateway need separate external ports since they are independent services that are running on the same host in the single-box installation.

Both port 80 and port 8089 must be open on the firewall for a single-box install.

The compute node only receives connections from the gateway and server nodes and typically runs on port 80 or port 443.

User management

Adding or removing an administrative user

An administrator can make any other user an administrator—or remove their administrator permissions—by using administrator commands in the Terminal application.

A user can also be designated as a superuser or as staff, giving them greater administrative privileges within the system.

Designating a user as an administrator/superuser

To designate a user as an administrator and superuser:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add <username>
```

NOTE: Replace <username> with the actual username.

EXAMPLE: To give administrative privileges to the user named "jsmith" and set them as a superuser, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --add jsmith
```

Removing an administrator/superuser

To remove a user's administrative privileges:

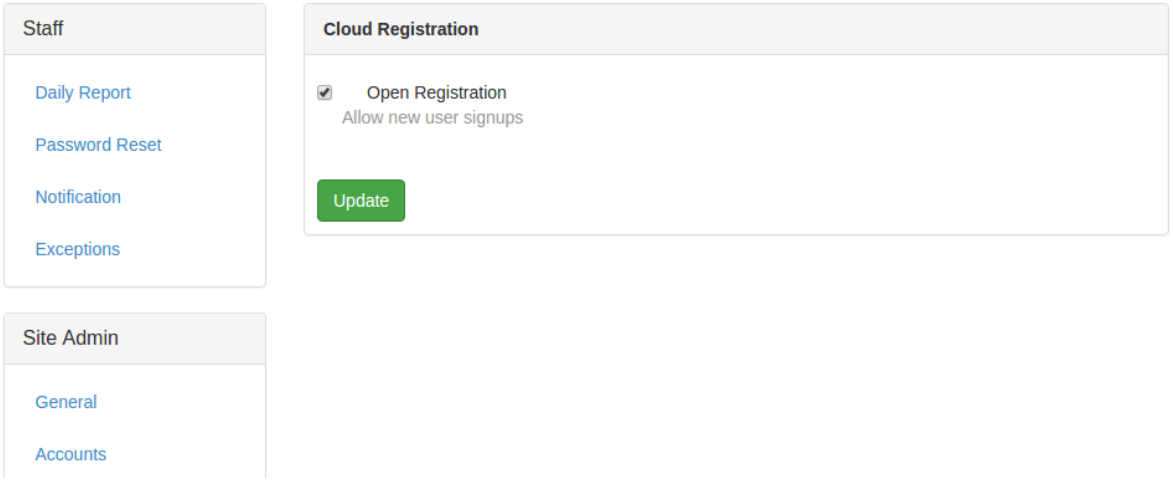
```
/opt/wakari/wakari-server/bin/wk-server-admin superuser --remove <username>
```

NOTE: Replace <username> with the actual username.

Allowing and restricting new user registration

When Open Registration is enabled, anyone who has access to the URL of your AEN server can create their own account.

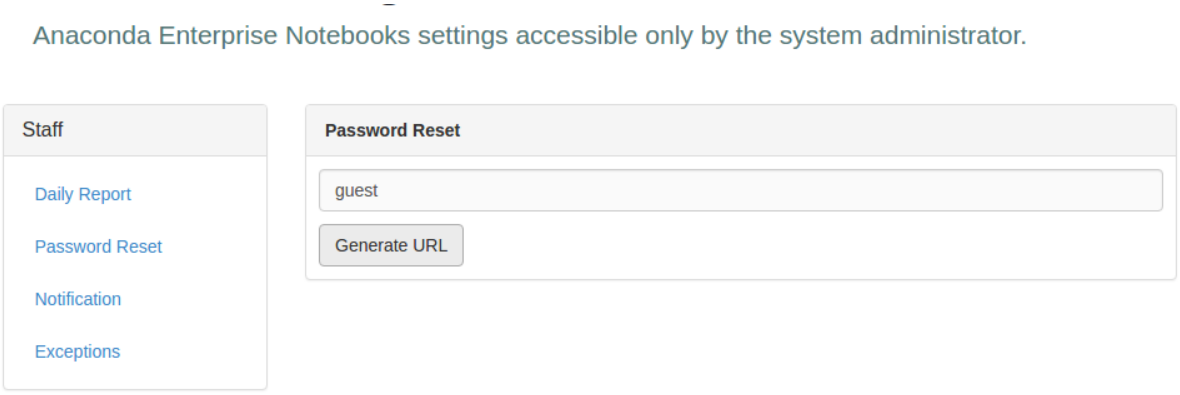
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Accounts.



3. To open user registration, select the Open Registration checkbox. To close registration, clear the checkbox.
4. Click the Update button.

Resetting a user password

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Password Reset:



3. Enter the username of the user whose password needs to be reset.
4. Click the Generate URL button.

   A password reset link is generated that you can email to the user.

Alternatively you may use the command line interface:

1. Use ssh to log in to the server as root.

2. Run:

```
/opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
↪PASSWORD
```

   NOTE: Replace SOME_USER with the username and SOME_PASSWORD with the password.

3. Log in to AEN as the user.

Managing permissions

This page explains the admin commands used to manage user permissions.

Checking file ownership

To verify that all files in the `/opt/wakari/anaconda` directory are owned by the `wakari` user or group:

```
root@server # find /opt/wakari/anaconda \! -user wakari -print
root@server # find /opt/wakari/anaconda \! -group wakari -print
```

Fixing file ownership settings

To fix the ownership settings of any files that are listed in the output:

```
chown -R wakari:wakari /opt/wakari/anaconda
```

Setting a file owner and permissions

To set a file owner and set its permissions:

```
chown wakari:wakari /opt/wakari/wakari-server/bin/wk-*
chmod 700 /opt/wakari/wakari-server/bin/wk-*
```

Verifying that POSIX ACLs are enabled

The `acl` option must be enabled on the file system that contains the project root directory.

NOTE: By default, the project root directory is `/projects`.

To determine the project root directory where a custom `projectRoot` is configured:

```
root@compute # grep projectRoot /opt/wakari/wakari-compute/etc/wakari/config.json
```

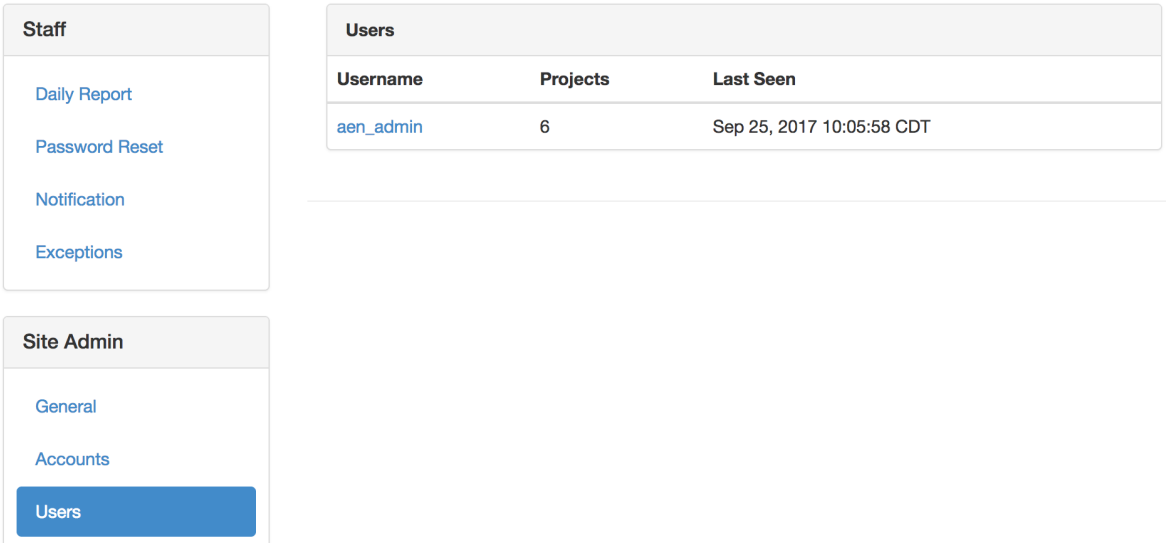
The `mount` options or default options listed by `tune2fs` should indicate that the `acl` option is enabled.

EXAMPLE:

```
root@compute # fs=`df /projects | tail -1 | cut -d " " -f 1`
root@compute # mount | grep $fs
/dev/vda on / type ext4 (rw)
root@compute # tune2fs -l $fs | grep options
Default mount options:    user_xattr acl
```

Viewing a list of users

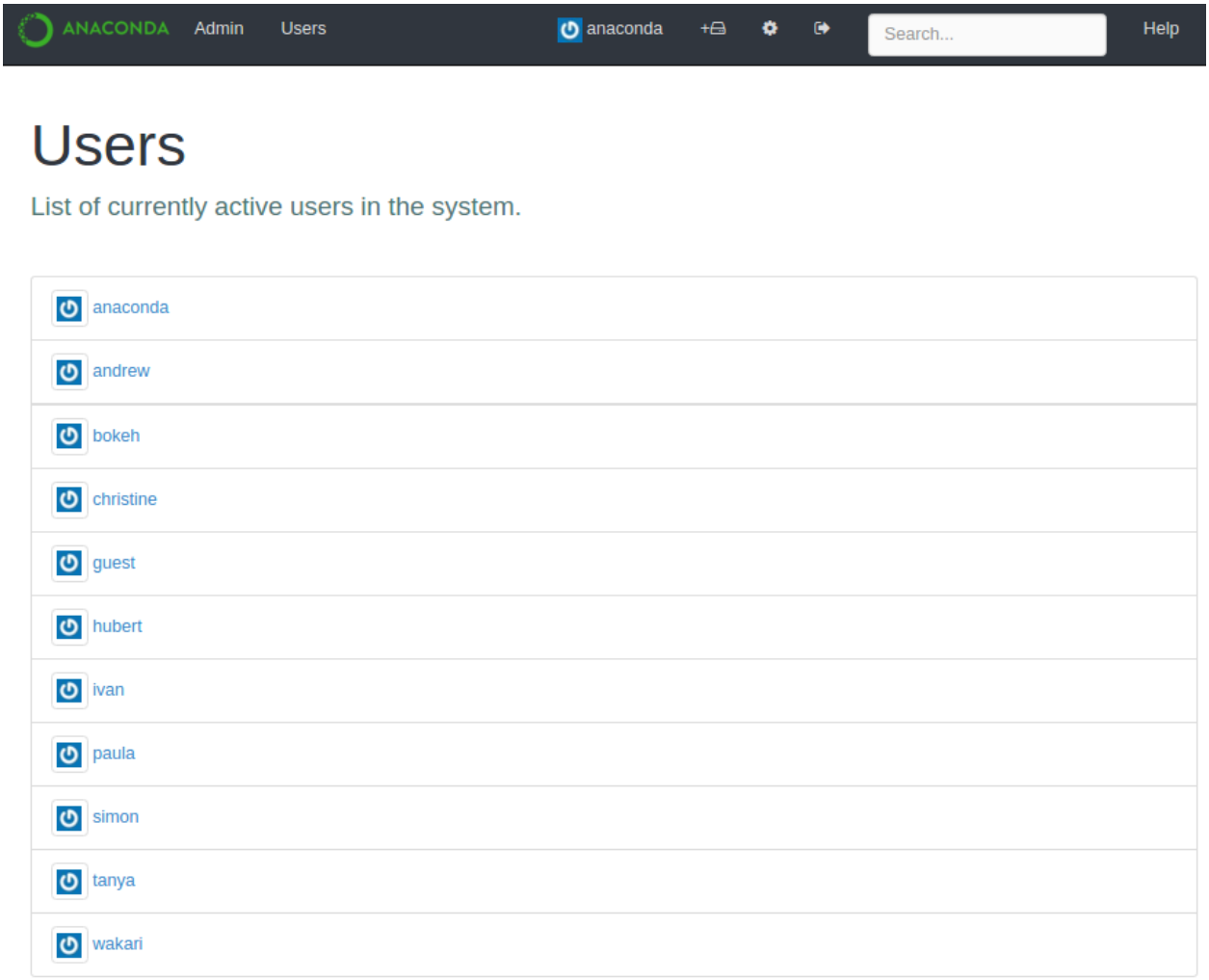
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Users:



The Users section lists the all users who are signed up, the number of projects they have created and the last time they logged on to AEN.

Viewing a list of currently active users

In the AEN navigation bar, click Users.

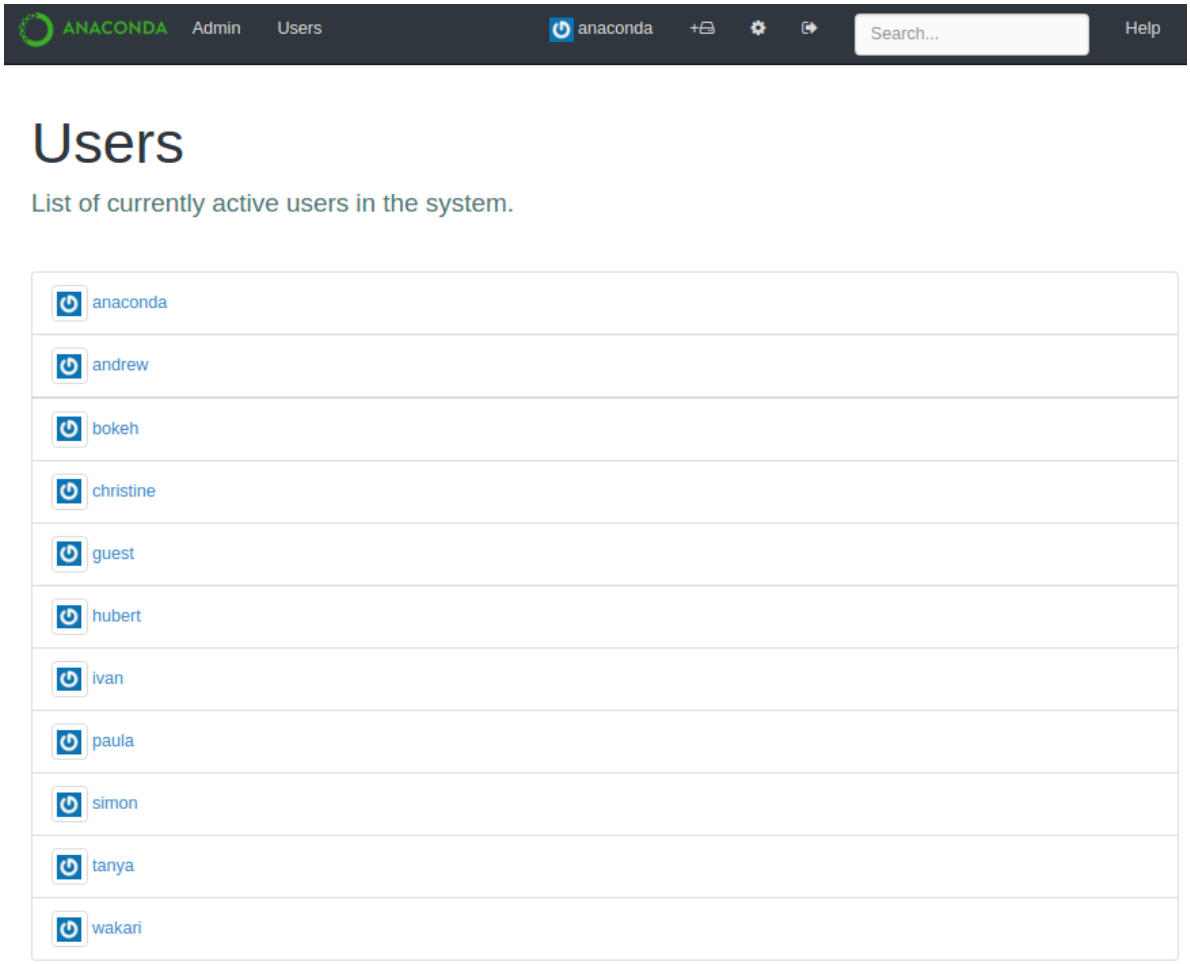


Click a username to open the user's profile page.

Viewing a user profile

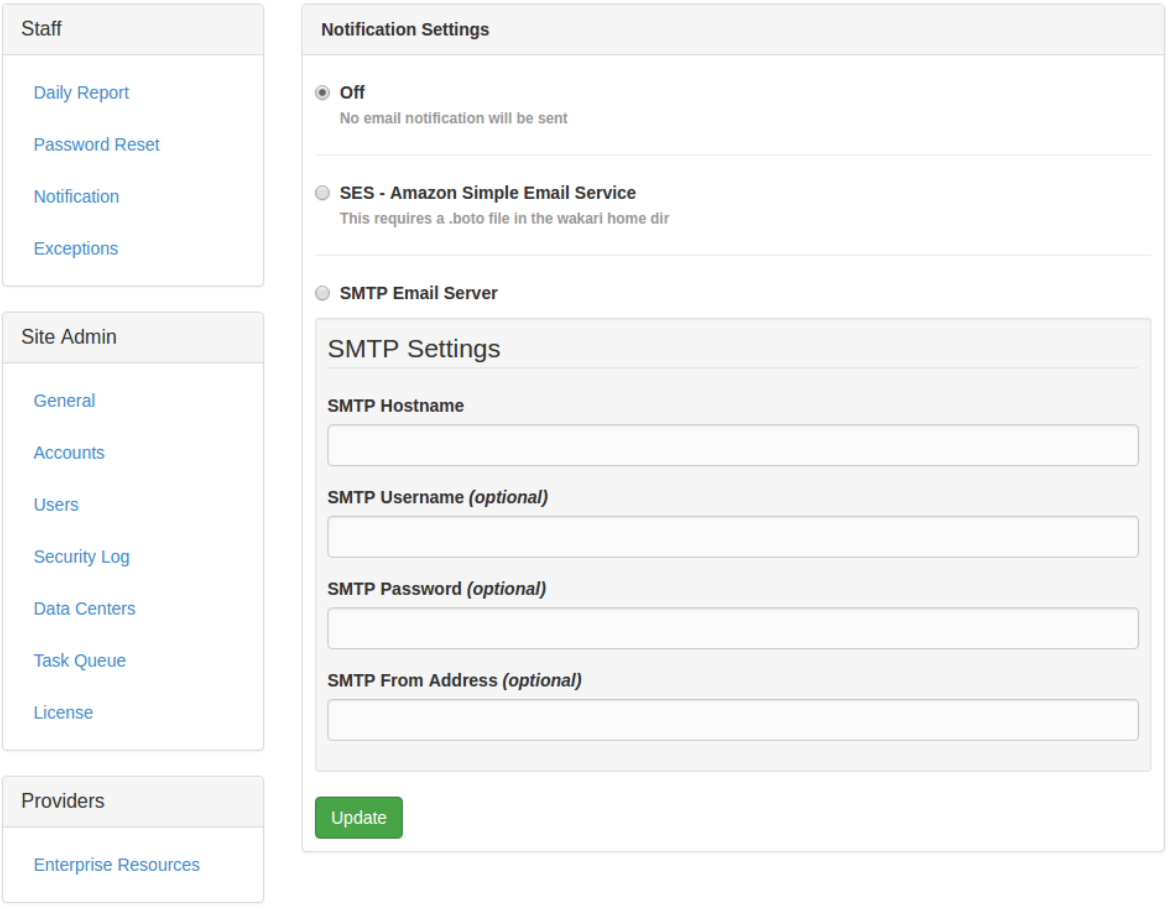
A user's profile page includes a summary of the projects created by that user and a list of projects on which the user is a team member.

1. In the AEN navigation bar, click Users to see a list of users who are currently logged into the system.
2. On the Users page, click the username of the user whose profile page you want to view.



Sending a system message

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Notification:



The Notification Settings section allows you to create a system message that can be relayed to users.

By default, notifications are off.

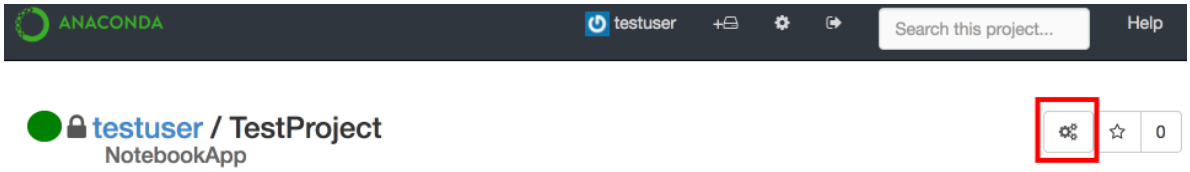
3. To turn on email notifications, select the radio button for the type of email service to use:
   - SES to use Amazon Simple Email Service (SES).
   - SMTP Email Server.
4. If you select SMTP Email Server, complete the SMTP Settings.

NOTE: If you get an error message after changing the SMTP settings, you may need to restart the server.

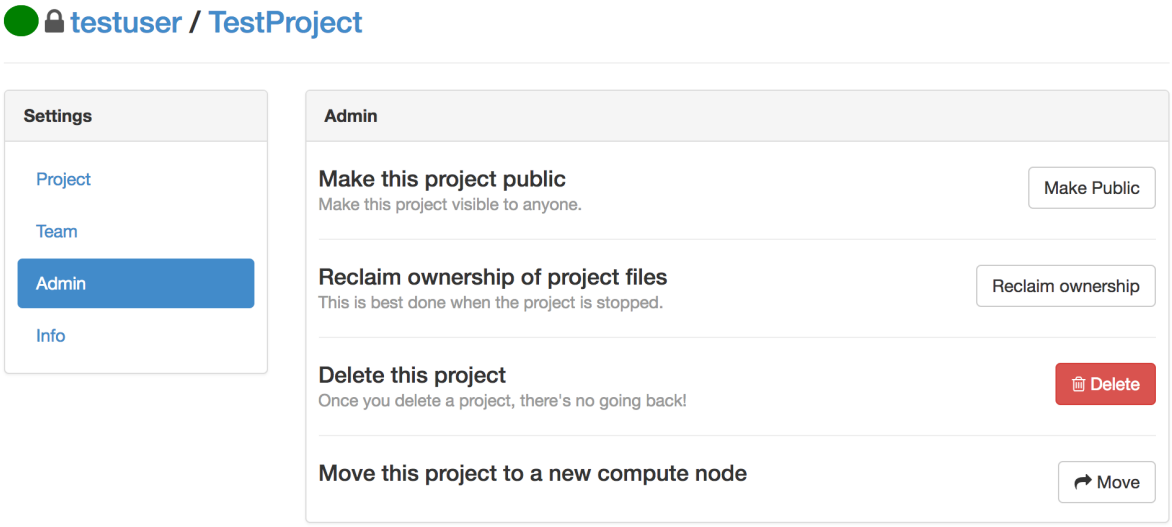
Moving a project to another compute node

If you have multiple compute nodes available and want to move a project from one to another, the project must exist on both nodes.

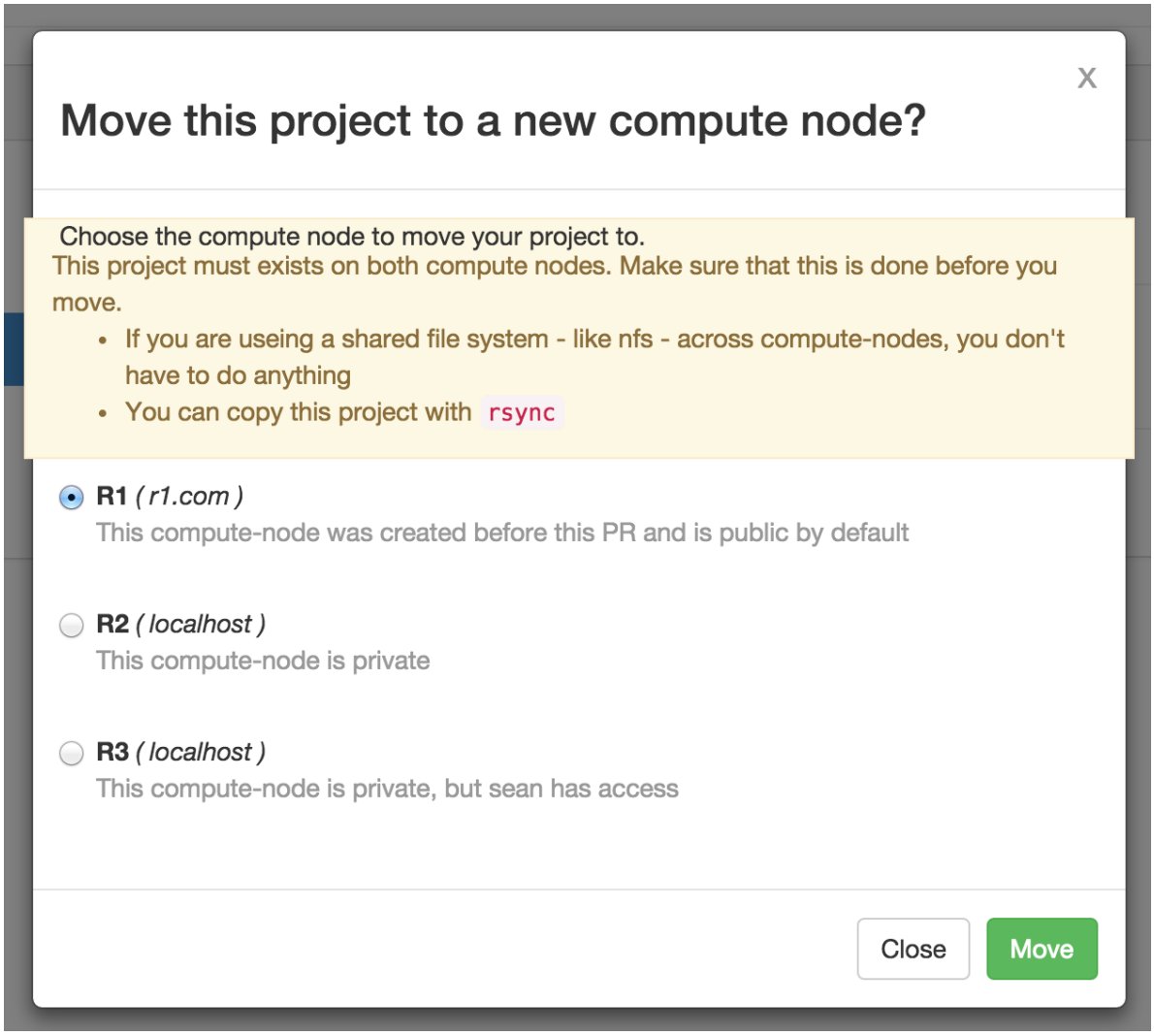
1. Verify that the project has been created on both compute nodes. You can use `rsync` for this job unless you have a shared file system like nfs.
2. On the project home page, click the Project Settings icon to open the Project Settings page.



3. In the **Settings** menu, select Admin.



4. Click the Move button.
5. In the move dialog box, click to choose the compute node destination, and click the Move button.



Deleting a user

To remove a user from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user <username>
```

NOTE: Replace <username> with the actual username.

NOTE: Changing the owner of a project requires that both the previous owner and the new owner are still AEN users. Before deleting a user, *change the owner* of that user's projects.

Deleting a project

To remove a project from the AEN database:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project <username> <projectname>
```

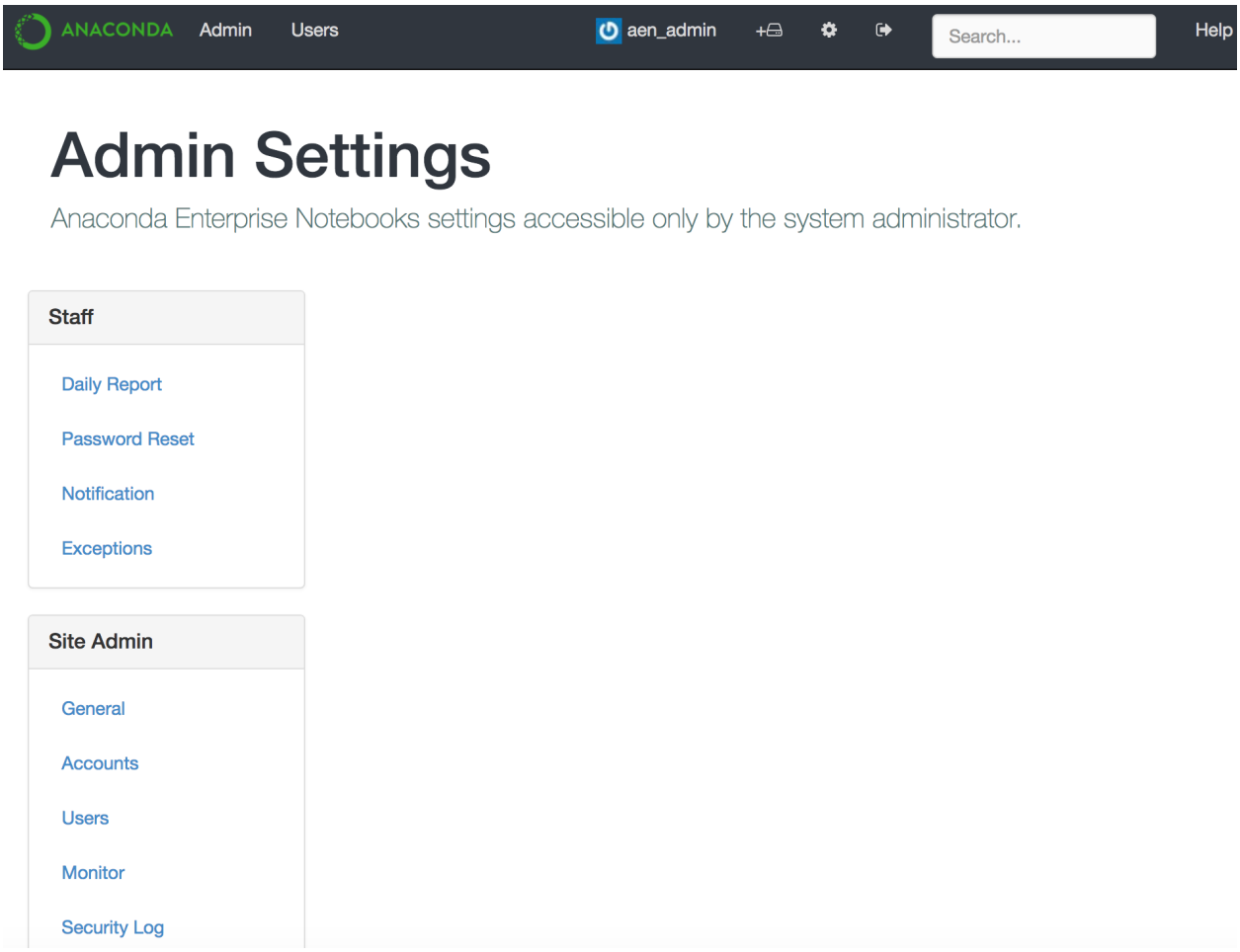
NOTE: Replace `<username>` with the actual username and `<projectname>` with the actual project name you are removing.

System management

Opening the Admin dashboard

If you have administrator privileges, you see two additional links in the AEN navigation bar—Admin and Users:

To open the Admin dashboard, click the Admin link.



Backing up and restoring AEN

Document purpose

This document lays out the steps to backup and restore Anaconda Enterprise Notebooks (AEN) for Disaster Recovery. It is not intended to provide High Availability. Each of the components (Server, Gateway and Compute) has its own instructions and each may be done individually as needed. The steps primarily involve creating tar files of important configuration files and data.

This document is written for a system administrator who is comfortable with basic Linux command line navigation and usage.

To migrate to a new cluster, use these backup and restore instructions to back up the system from the old cluster and restore it to the new cluster.

Important notes

Review the *Concepts* page to become familiar with the different components and how they work together.

Root or sudo access is required for some commands.

CAUTION: All commands MUST be run by `$AEN_SRVC_ACCT` (the account used to run AEN) except for those commands explicitly indicated to run as root or sudo. If the commands are not run by the correct user, the installation will not work, and a full uninstallation and reinstallation will be required!

These instructions assume that the fully qualified domain name (FQDN) has not changed for any of the component nodes. If any of the FQDNs are not the same, additional steps will be needed.

Server component steps

Backup

Mongo database

This will create a single tar file called `aen_mongo_backup.tar` that includes only the database named "wakari" that is used by AEN. It also generates a log of the database backup.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
mongodump -db wakari -o aen_main >> mongo_backup.log
tar -cvf aen_mongo_backup.tar aen_main
```

AEN Server config files (including License file)

Create a tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_server_config.tar -C /opt/wakari/ wakari-server/etc/wakari/
```

Nginx config (if needed)

Make a copy of the nginx configuration file if it has been customized. The default configuration for the AEN server is a symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Make a copy of the SSL certificates files (certfiles) for the server, including the key file, and a copy of the certfile for the gateway, which is needed for verification if using self-signed or private CA signed certs.

Restore

Reinstall AEN-Server

See *the instructions for installing the current version of AEN-Server*.

It is not necessary to upload the license, because it will be restored with the config files.

NOTE: The new installation will generate a new password for the local `$AEN_SRVC_ACCT` account.

Restore Mongo database

This assumes that mongo was reinstalled as part of the reinstallation of the server component. Untar the mongo database and restore it.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_mongo_backup.tar
mongorestore --drop aen_main
```

NOTE: The `--drop` option resets the `$AEN_SRVC_ACCT` user password and restores the database to the exact state it was in at the time of backup. Please see the MongoDB documentation for more information about mongorestore options for Mongo 2.6.

NOTE: AEN uses Mongo 2.6 by default. If you are using a different version, consult the documentation for your version.

AEN Server config files (including License file)

Untar the tar file of all of the configuration files, including any license files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_server_config.tar -C /opt/wakari/
```

Make sure the files are in `/opt/wakari/wakari-server/etc/wakari/` and are owned by the `$AEN_SRVC_ACCT`.

Nginx config (if needed)

Make sure any modifications to the nginx configuration are either in `/etc/nginx/conf.d` or in `/opt/wakari/wakari-server/etc/nginx/conf.d/` with a proper symlink.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
/etc/nginx/conf.d/www.enterprise.conf -> /opt/wakari/wakari-server/etc/nginx/conf.d/www.
↪enterprise.conf
```

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart server

Restart the server application.

NOTE: This command must be run as root or with sudo.

```
service wakari-server restart
```

Gateway component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_gateway_config.tar -C /opt/wakari/ wakari-gateway/etc/wakari/
```

Custom .condarc file (if needed)

Make a copy of any `/opt/wakari/miniconda/.condarc` if it has been modified.

SSL certificates (if needed)

Make a copy of SSL certificate files for the gateway (including the key file) and the certfile for the server (needed for verification if using self-signed or private CA signed certs).

Restore

Reinstall AEN-Gateway

Setting variables and changing permissions

NOTE: These commands must be run by $AEN_SRVC_ACCT.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
export AEN_GATEWAY_PORT=8089
export AEN_GATEWAY=<FQDN HOSTNAME OR IP ADDRESS>  # will be needed shortly
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists. If the terminal is closed before successful installation, export the variables to continue with the installation.

Running the AEN gateway installer

Run:

```
sudo -E ./aen-gateway-4.2.2-Linux-x86_64.sh -w $AEN_SERVER
<license text>
...
...

PREFIX=/opt/wakari/wakari-gateway
Logging to /tmp/wakari_gateway.log
...
...
Checking server name
Please restart the Gateway after running the following command
to connect this Gateway to the AEN Server
...
```

Config files

Untar the configuration files.

NOTE: This command must be run by $AEN_SRVC_ACCT.

```
tar -xvf aen_gateway_config.tar -C /opt/wakari
```

Verify that the files are in /opt/wakari/wakari-gateway/etc/wakari/ and are owned by the $AEN_SRVC_ACCT.

Custom .condarc file (if needed)

Move the custom .condarc file to `/opt/wakari/miniconda/.condarc`.

SSL certificates (if needed)

Move any SSL certificate files to the locations indicated in the config files.

Restart gateway

Restart the gateway application.

NOTE: This command must be run as root or with sudo.

```
service wakari-gateway restart
```

Compute component steps

Backup

Config files

Create a tar file of all of the configuration files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_config.tar -C /opt/wakari/ wakari-compute/etc/wakari
```

Custom Changes (rare)

Manually backup any custom changes that were applied to the code. One change might be additional files in the skeleton folder:

`/opt/wakari/wakari-compute/lib/node_modules/wakari-compute-launcher/skeleton`

Create user list

AEN uses POSIX access control lists (ACLs) for project sharing, so the backup must preserve the ACL information. This is done with a script that creates a file named `users.lst` containing a list of all users that have access to projects on a given compute node. Download and run the script.

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

```
wget https://s3.amazonaws.com/continuum-airgap/misc/wk-compute-get-acl-users.py
chmod 755 wk-compute-get-acl-users.py
./wk-compute-get-acl-users.py
```

Project files

Create a tar of the projects directory with ACLs enabled. The default projects base location is `/projects`.

NOTE: This command must be run as root or with sudo.

```
tar --acls -cpvf projects.tar -C <projects base location>/*
```

Full Anaconda (option 1)

If any changes have been made to the default Anaconda installation (additional packages installed or packages removed), it is necessary to backup the entire Anaconda installation.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_anaconda.tar -C /opt/wakari/anaconda/*
```

If no changes have been made to the default installation of Anaconda, you may just backup the `.condarc` file and any custom environments.

Partial Anaconda (option 2)

Custom `.condarc` file

Make a copy of `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Create a tar file of any custom shared environments.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -cvf aen_compute_envs.tar -C /opt/wakari/ anaconda/envs
```

NOTE: If no custom shared environments have been created, the `envs` folder will not be present.

Restore

Reinstall AEN-Compute

Setting variables and changing permissions

NOTE: These commands must be run by `$AEN_SRVC_ACCT`.

Run:

```
export AEN_SERVER=<FQDN HOSTNAME OR IP ADDRESS> # Use the real FQDN
chmod a+x aen-*.sh                # Set installer to be executable
```

NOTE: Change <FQDN HOSTNAME OR IP ADDRESS> to the actual fully qualified domain hostname or IP address.

NOTE: You must perform the entire procedure before closing the terminal to ensure the variable export persists.

Running the AEN compute installer

Run:

```
sudo -E ./aen-compute-4.2.2-Linux-x86_64.sh -w $AEN_SERVER
...
...
PREFIX=/opt/wakari/wakari-compute
Logging to /tmp/wakari_compute.log
Checking server name
...
...
Initial clone of root environment...
Starting Wakari daemons...
installation finished.
Do you wish the installer to prepend the wakari-compute install location
to PATH in your /root/.bashrc ? [yes|no]
[no] >>> yes
```

Config files

Untar the config files.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_config.tar -C /opt/wakari
```

NOTE: Verify that they are located in `/opt/wakari/wakari-compute/etc/wakari` and are owned by the `$AEN_SRVC_ACCT`.

Custom changes (rare)

Manually restore any custom changes you saved in the backup section. If there are changes in the skeleton directory, these files must be world readable or projects will refuse to start.

Create users

NOTE: Only create users with these instructions if your Linux machine is not bound to LDAP.

In order for the ACLs to be set properly on restore, all users that have permissions to the files must be available on the machine. Ask your system administrator for the proper way to do this for your system, such as using the "useradd" tool. A list of users that are needed was created in the backup process as a file named `users.lst`.

A process similar to the following `useradd` example will be suitable for most Linux systems.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
xargs -0 -n 1 useradd --user-group < users.lst
```

Project files

Create the projects directory in the location specified in projectRoot in `wk-compute-launcher-config.json`.

NOTE: By default this directory is `/projects`.

Then untar the projects directory with ACLs.

NOTE: This command must be run as root or with sudo:

```
tar --acls -xpvf projects.tar -C <projects base location>
```

Full Anaconda (option 1)

If you did a full backup of the full Anaconda installation, untar this file to `/opt/wakari/anaconda`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_anaconda.tar -C /opt/wakari
```

Partial Anaconda (option 2)

Restore the custom `.condarc` file.

If you did a partial backup of the Anaconda installation, move the copy of the `.condarc` file to `/opt/wakari/anaconda/.condarc`.

Custom environments (if needed)

Untar any custom environments that were created to `/opt/wakari/anaconda/envs`.

NOTE: This command must be run by `$AEN_SRVC_ACCT`.

```
tar -xvf aen_compute_envs.tar -C /opt/wakari
```

Restart compute node

Restart the compute-launcher application.

NOTE: This command must be run as root or with sudo.

```
service wakari-compute restart
```

Viewing a list of admin commands

A user who is promoted to administrator can access administrator commands to perform advanced administrator tasks.

NOTE: Utility files are owned by, and should only be executed by, the AEN user who owns the files.

To display a list of all administrator commands:

```
ls -al /opt/wakari/wakari-server/bin/wk-*
```

Viewing help for admin commands

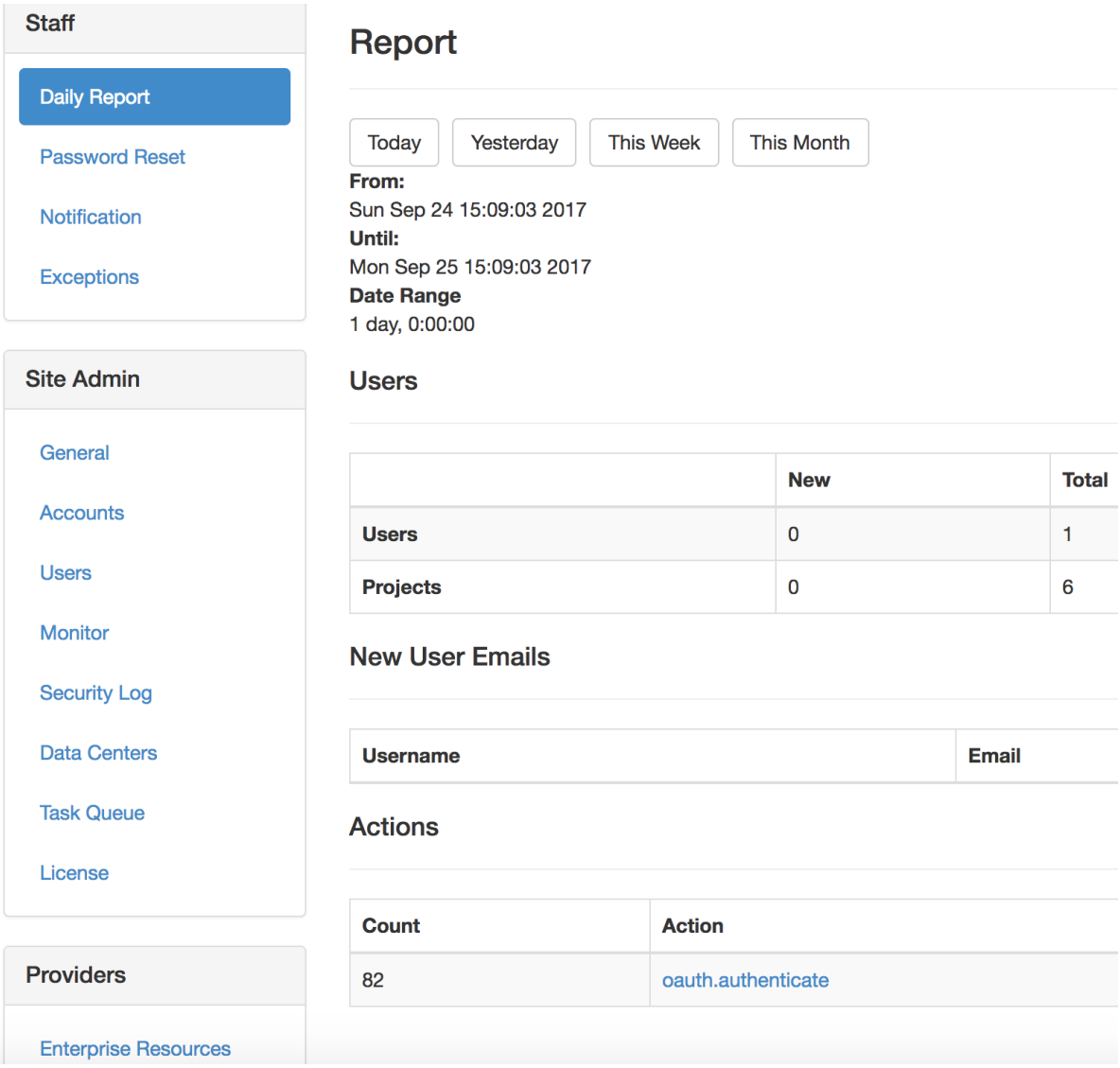
To view help information for command, run the command followed by `-h` or `--help`.

EXAMPLE: To view help for the `remove-user` command:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-user -h
/opt/wakari/wakari-server/bin/wk-server-admin remove-project -h
```

Running daily reports

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Daily Report:



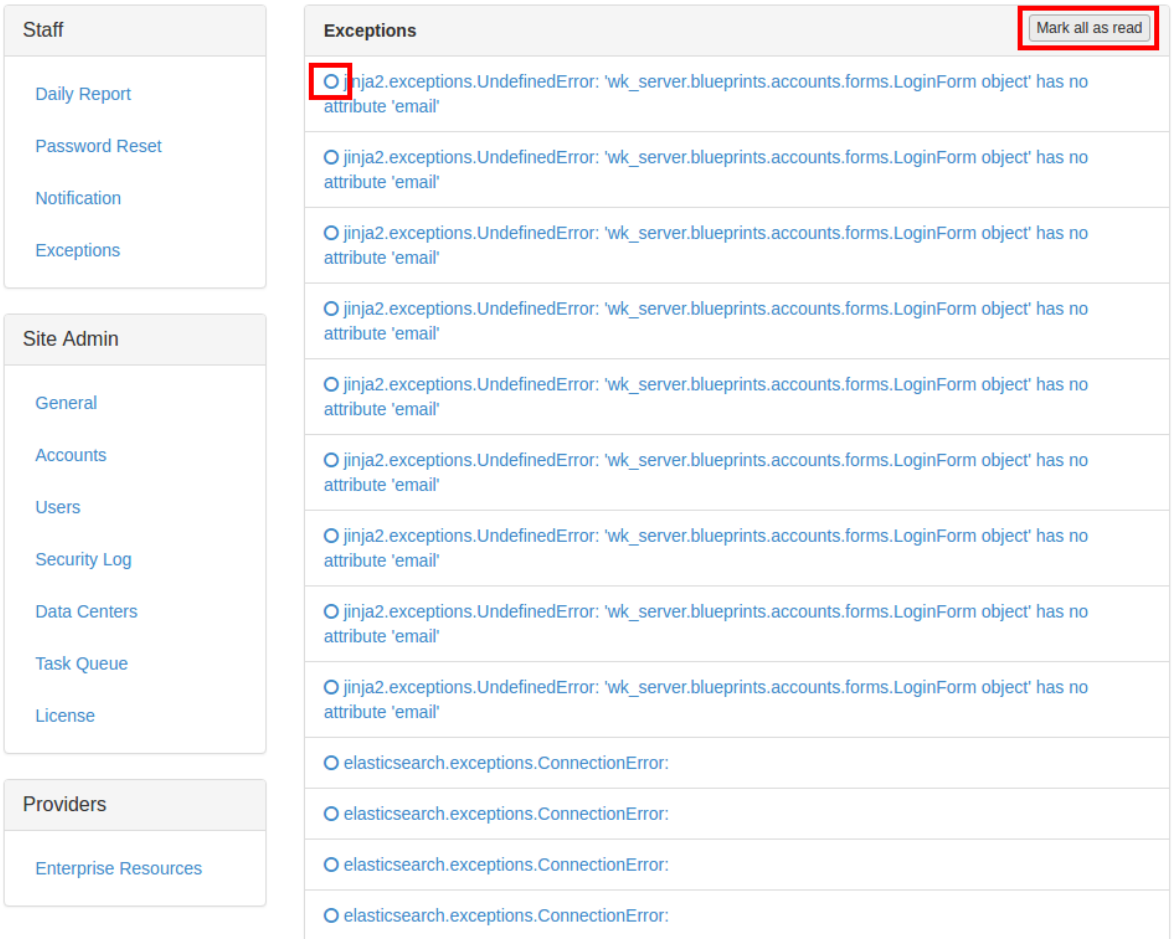
The Report section displays the following:

- Users—The number of users and projects.
- New User Emails—If *open registration is enabled*, the user names and emails for new users.
- Actions—The actions—projects created, projects updated, user authentications and added users—that have occurred in during the selected time frame—today, yesterday, this week, or this month.

Viewing system errors

When an error occurs, a red dot is displayed in the AEN navigation bar next to the Admin link. The red dot is removed when all exceptions are marked as "read."

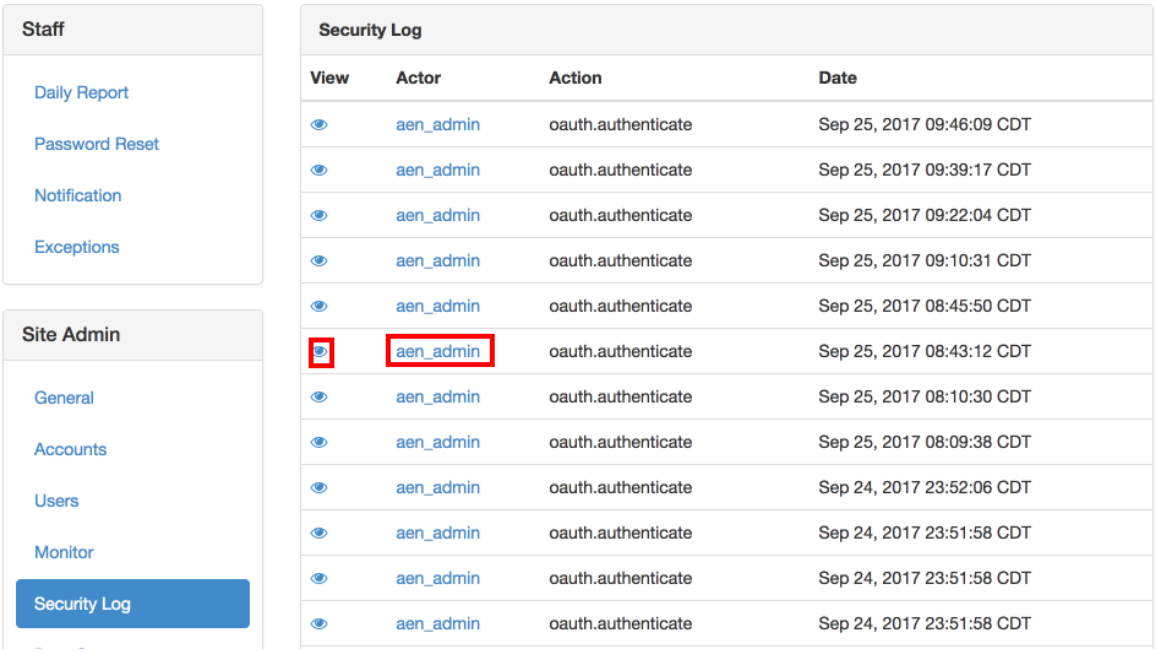
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Staff** menu, select Exceptions:



   The Exceptions section lists all errors that have occurred while AEN is running.
3. To see the details of an error, click the radio button next to the error. This also marks the error as "read."
4. To mark all errors as read without reviewing each one, click the Mark all as read button.

Viewing security errors

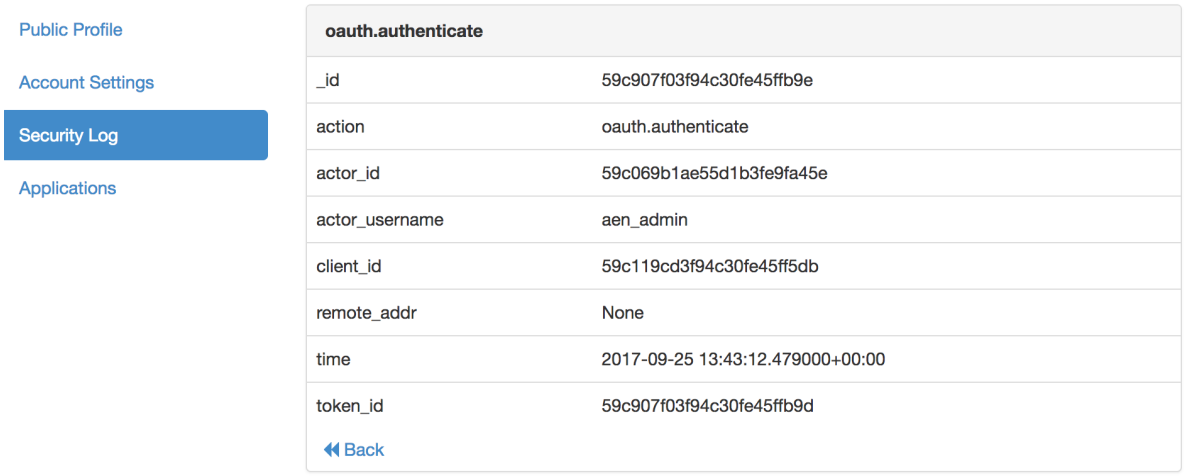
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Security Log:



The Security Log section lists all errors that have occurred that could potentially affect AEN security.

3. To view a user's profile page, click their username in the Actor column.
4. To see the details of an error, click the Eye icon next to the error.

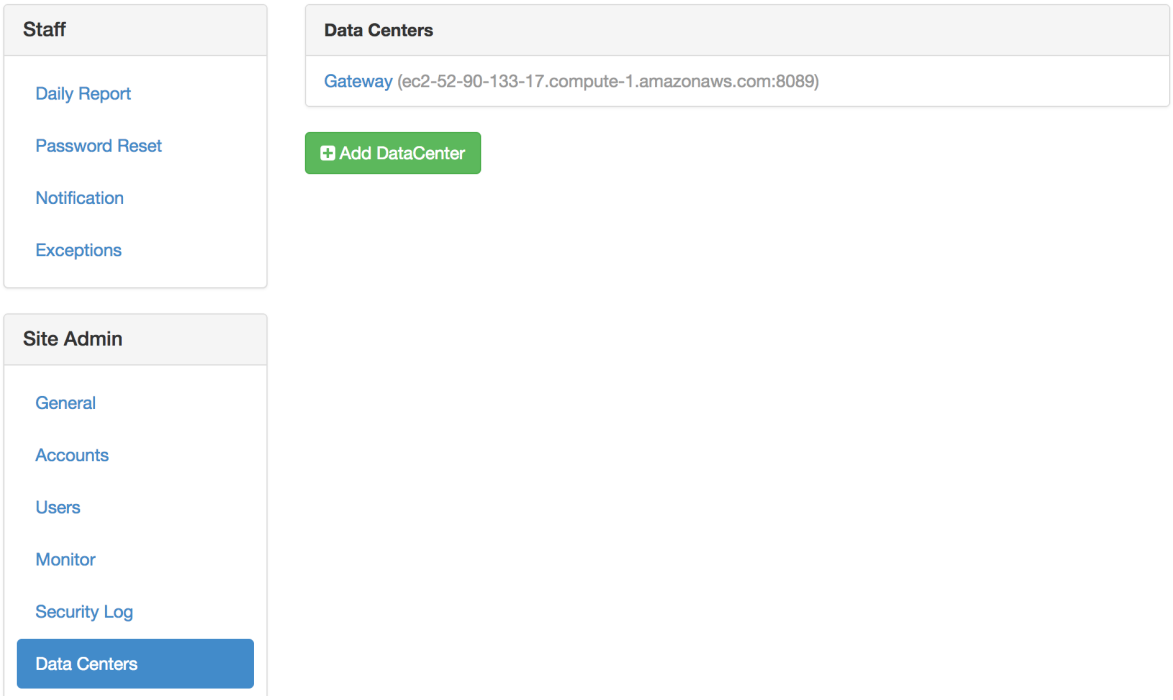
   The error details are displayed:



5. To close the error details, click the Back link.

Managing data centers

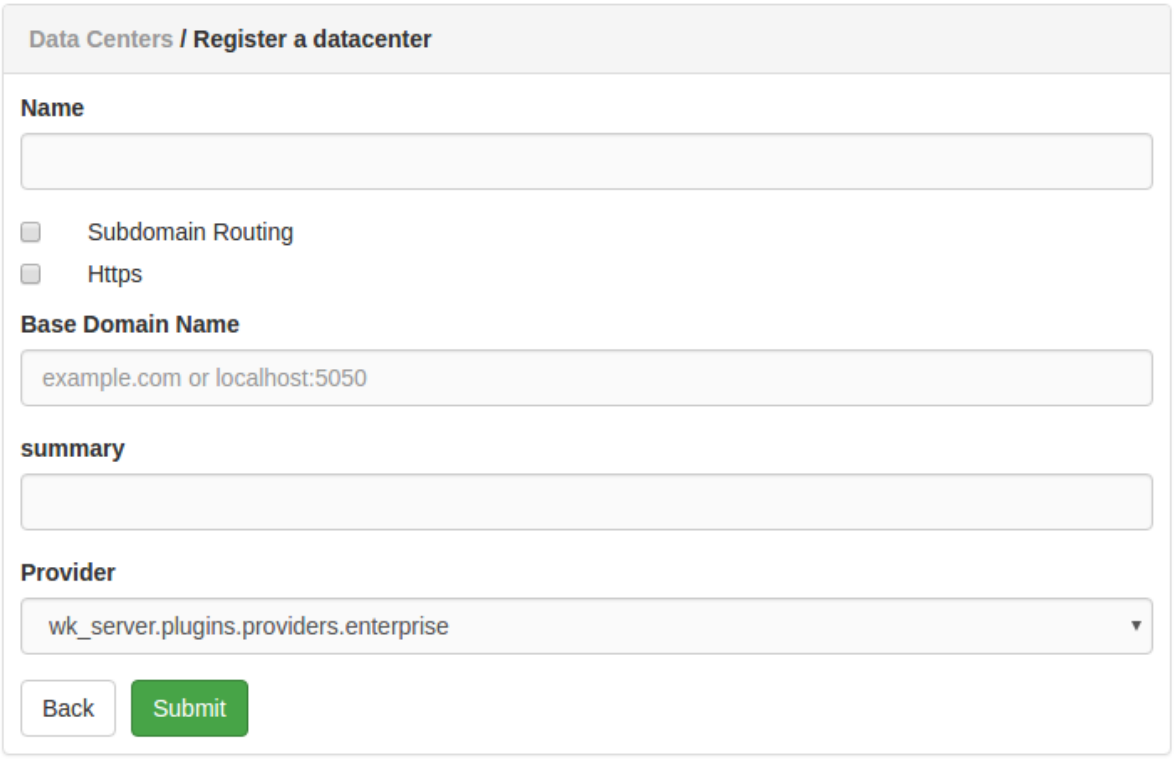
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



The Data Centers section displays current data center information.

Adding a data center

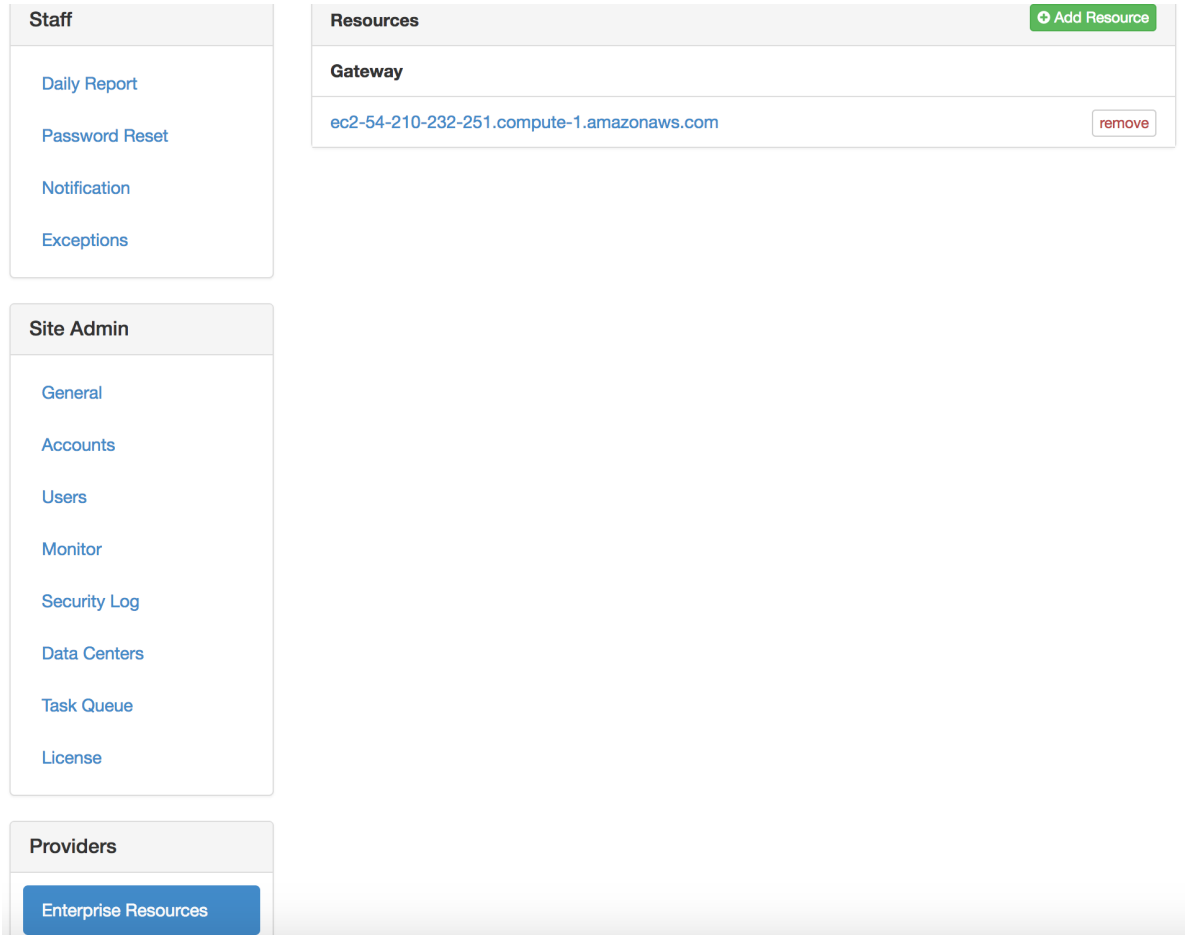
1. Click the Add DataCenter button to display the the Register a datacenter form.
2. In the Name box, type a Name for the new data center:



3. Select the Subdomain Routing and/or Https checkboxes.
4. In the Base Domain Name box, type the base domain name.
5. In the Summary box, type a description of the data center.
6. In the Provider list, select a provider.
7. Click the Submit button.

Managing enterprise resources

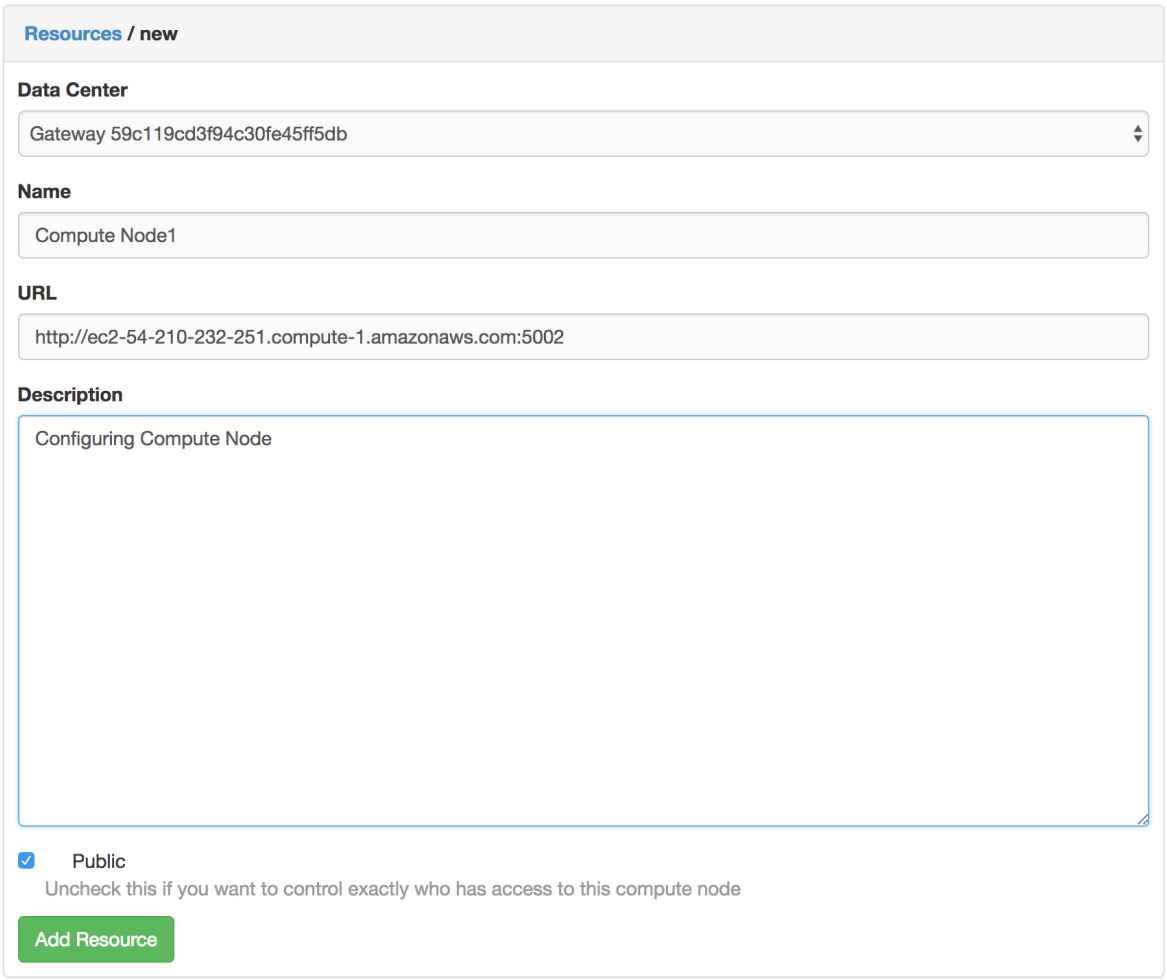
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



The Resources section lists your existing cloud and local resources.

Adding a resource

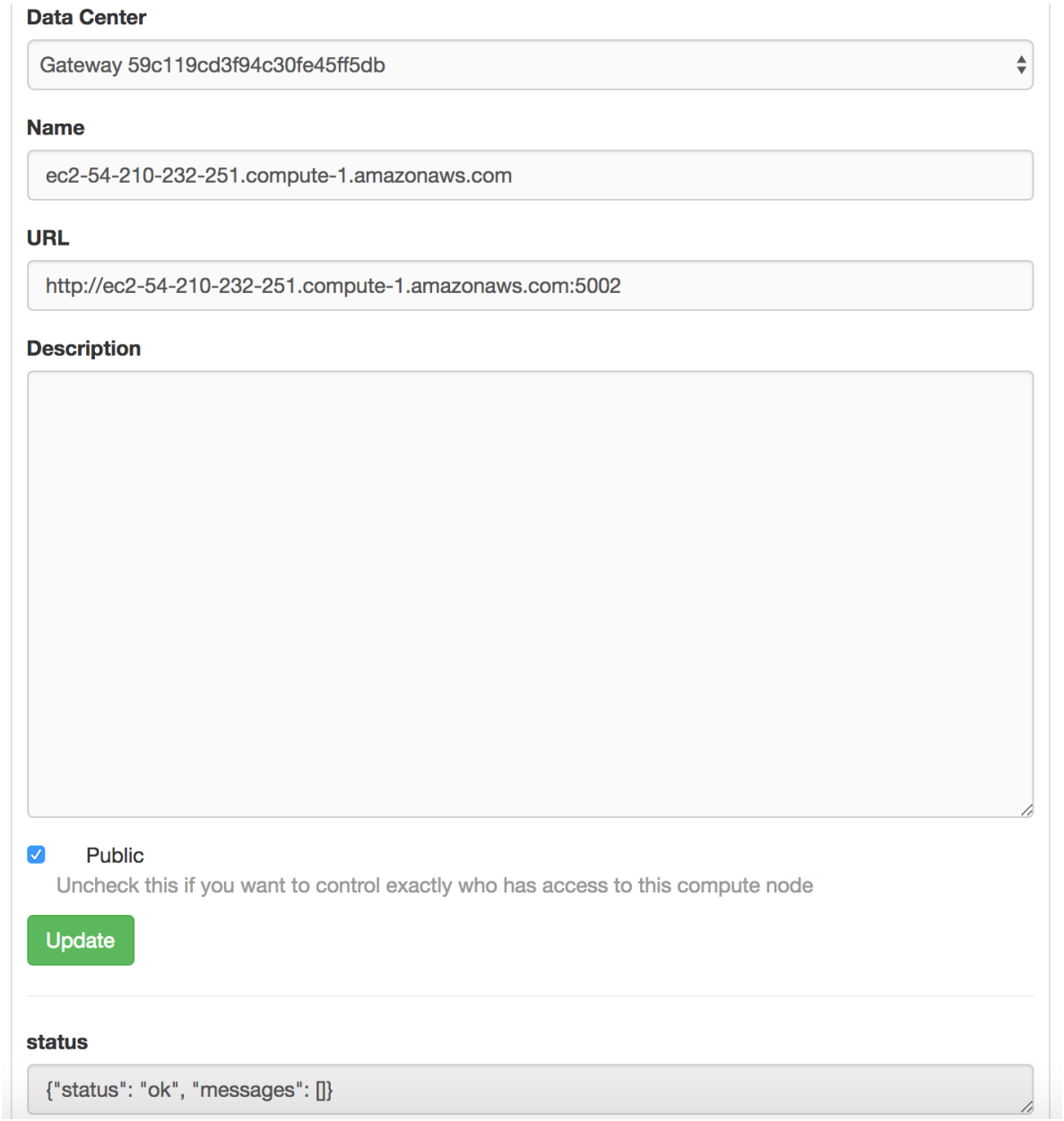
1. Click the Add Resource button to open the new resource form.
2. Complete the form:



3. Click the Add Resource button.

Viewing or changing the resource details

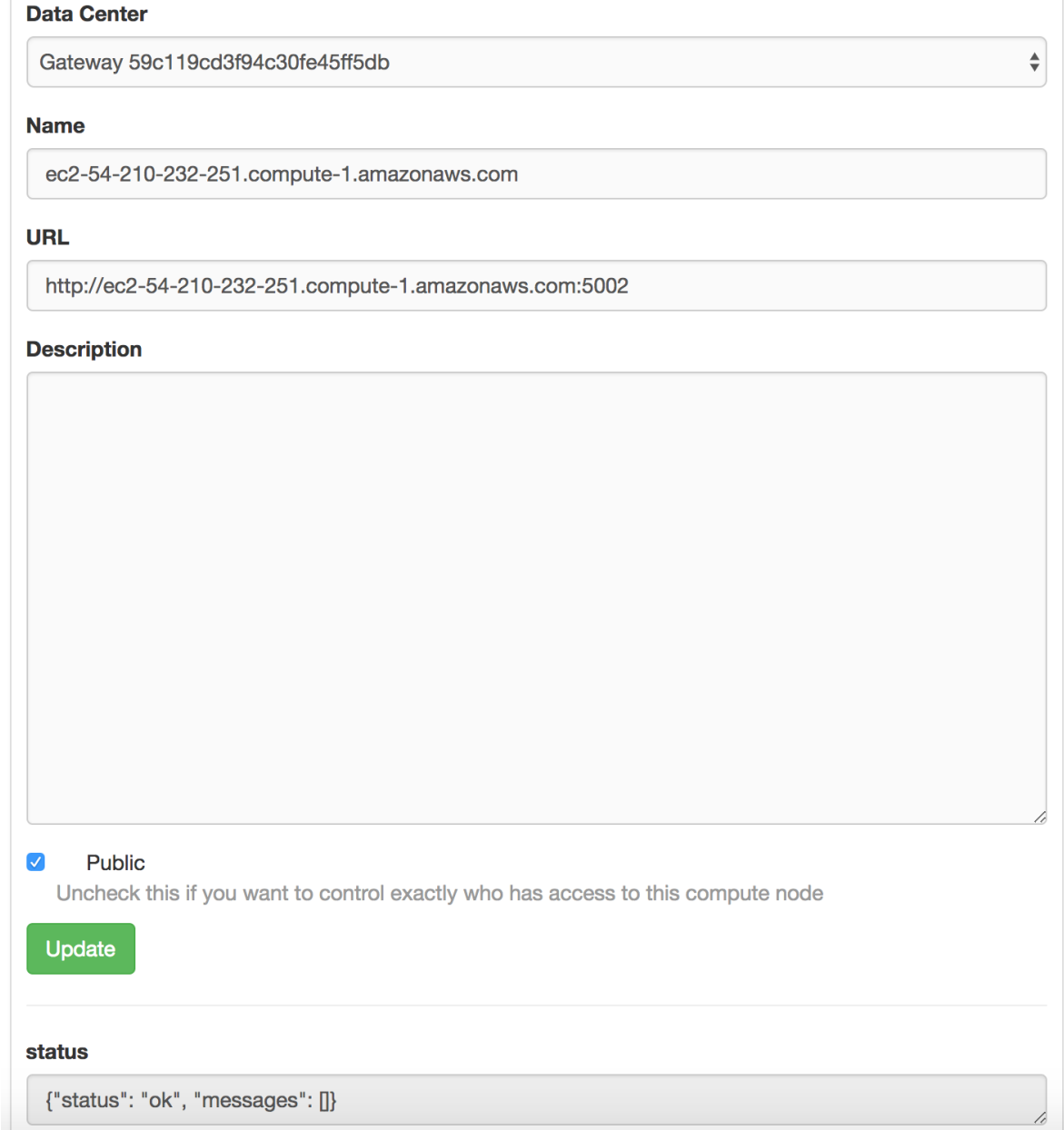
1. Click a resource name to open the Local Resource form.
2. If necessary, change the resource details:



3. Click the Update button.

Making a node public or private

1. Click the resource name to open the Local Resource form.
2. Select or clear the Public checkbox:



3. Click the Update button.

Removing a resource

Click the Remove button next to the resource you want to remove.

NOTE: When you remove a resource assigned to a project, the project becomes orphaned. To fix an orphaned project, *move the project to a valid Compute Resource*.

Managing services

The tasks on this page assume that the 3 AEN nodes are installed in the following locations:

- Server–`/opt/wakari/wakari-server/`.
- Gateway–`/opt/wakari/wakari-gateway/`.
- Compute-Launcher–`/opt/wakari/wakari-compute/`.

Checking the status of server node processes

1. Run:

```
# service wakari-server status
wk-server                        RUNNING    pid 20758, uptime 5 days, 0:30:23
worker                           RUNNING    pid 20757, uptime 5 days, 0:30:23
```

   OR

```
root@server # ps -Hu wakari
  PID TTY          TIME CMD
20756 ?        00:02:26 .supervisord
20757 ?        00:05:58   mtq-worker
20758 ?        00:00:08   wk-server
20765 ?        00:02:00     wk-server
20766 ?        00:01:55     wk-server
20767 ?        00:02:20     wk-server
20770 ?        00:02:02     wk-server
```

2. Run:

```
root@server # service nginx status
nginx (pid  26303) is running...
```

For more information on server processes, see *Server processes*.

Checking the status of gateway node processes

Run:

```
# service wakari-gateway status
wk-gateway                       RUNNING    pid 1137, uptime 5 days, 1:59:28
```

OR

```
root@gateway # ps -Hu wakari
  PID TTY          TIME CMD
 1136 ?        00:01:59 .supervisord
 1137 ?        00:00:02   wk-gateway
```

For more information on gateway processes, see *Gateway processes*.

Checking the status of compute node processes

Run:

```
# service wakari-compute status
wk-compute                       RUNNING    pid 22050, uptime 3 days, 1:03:19
```

OR

```
root@compute # ps -Hu wakari
  PID TTY          TIME CMD
 1150 ?        00:02:01 .supervisord
 1152 ?        00:00:01   wk-compute
```

For more information on compute node processes, see *Compute processes*.

Starting AEN services

Services should start automatically both when they are first installed and at any point when the system is restarted.

If you need to manually start an AEN service, you must start each node independently, because they may be running on separate machines.

NOTE: The process is basically the same for each node, but the path to the correct commands vary.

To manually start a service:

- On the server node, run:

  ```
  service wakari-server start
  ```

- On the gateway node, run:

  ```
  service wakari-gateway start
  ```

- On a compute node, run:

  ```
  service wakari-compute start
  ```

Verifying that AEN services are set to start with the system

To verify that AEN services are set up to start automatically:

1. Run the following command on each node:

```
chkconfig --list | grep wakari
```

2. If services are missing, add them:

```
chkconfig --add [wakari-server|wakari-gateway|wakari-compute]
```

3. *Restart the services*.

Stopping AEN services

CAUTION: Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

You must stop services on each node independently, because they may be running on separate machines.

To stop an AEN service:

- On the server node, run:

```
service wakari-server stop
```

- On the gateway node, run:

```
service wakari-gateway stop
```

- On a compute node, run:

```
service wakari-compute stop
```

  Compute nodes may have running processes that are not automatically stopped. To stop them, run:

```
sudo /opt/wakari/wakari-compute/bin/wk-compute-apps kill-all
```

Restarting AEN services

- On the server node, run:

```
service wakari-server restart
```

- On the gateway node, run:

```
service wakari-gateway restart
```

- On a compute node, run:

```
service wakari-compute restart
```

Identifying extraneous processes

To get a complete list of the processes running under the wakari user account, run `ps -Hu wakari`.

EXAMPLE:

```
root@server # ps -Hu wakari
   PID TTY          TIME CMD
 20756 ?        00:02:26 .supervisord
 20757 ?        00:05:58   mtq-worker
 20758 ?        00:00:08   wk-server
 20765 ?        00:02:00     wk-server
 20766 ?        00:01:55     wk-server
 20767 ?        00:02:20     wk-server
 20770 ?        00:02:02     wk-server

 root@server # ps -f -C nginx
 UID     PID  PPID  C STIME TTY     TIME CMD
 root  26303     1  0 12:18 ?   00:00:00 nginx: master process /usr/sbin/nginx -c /etc/
↪nginx/nginx.conf
 nginx 26305 26303  0 12:18 ?   00:00:00 nginx: worker process

 root@gateway # ps -Hu wakari
   PID TTY          TIME CMD
  1136 ?        00:01:59 .supervisord
  1137 ?        00:00:02   wk-gateway

 root@compute # ps -Hu wakari
   PID TTY          TIME CMD
  1150 ?        00:02:01 .supervisord
  1152 ?        00:00:01   wk-compute
```

- wk-server, wk-gateway and wk-compute should have PIDs reported by supervisorctl.
- The nginx master process should have a PID reported by service nginx status.
- If you have installed more than one AEN node on a single machine, the processes from all of the installed nodes should be displayed for that machine.
- On compute node(s), any AEN applications currently being run by users will be present.

  EXAMPLE:

  ```
  root@compute # ps -Hu wakari
    PID TTY          TIME CMD
   1150 ?        00:00:00 .supervisord
   1152 ?        00:00:00   wk-compute
   1340 ?        00:00:00 bash
   1341 ?        00:00:00   notebookwrapper
  ```

Removing extraneous processes

If extra wk-server, wk-gateway, wk-compute, or supervisord processes are present, use the `kill` command to remove them to prevent issues with AEN.

You can safely *restart* any process that you remove in error.

Making sure NGINX and MongoDB are running

In order for AEN to run, the dependencies *mongodb* and *nginx* must be up and running. If either of these fail to start, AEN will not be served on port 80.

Check if *nginx* and *mongod* are both running (RHEL 6x):

```
$ sudo service nginx status
nginx (pid  25956) is running...

$ sudo service mongod status
mongod (pid 25928) is running...
```

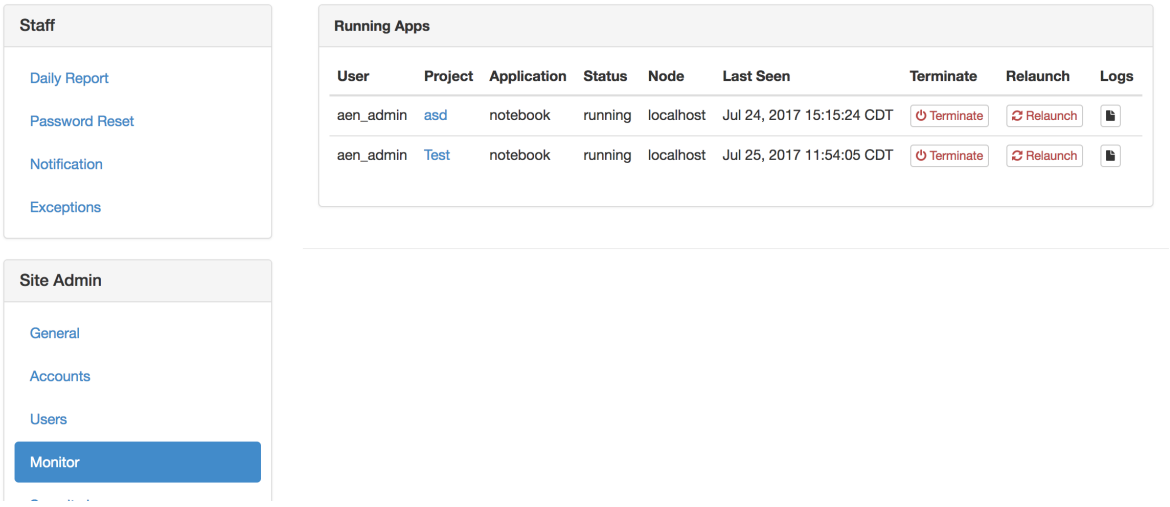
If either of these failed to start, tail the log files. The default location of log files is:

```
$ tail -n 50 /var/log/mongodb/mongod.log

# nginx errors reported in error.log
$ tail -n 50 /var/log/nginx/error.log
```

Viewing, terminating, and relaunching applications

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Monitor:



   The Monitor menu lists started applications by user and project.

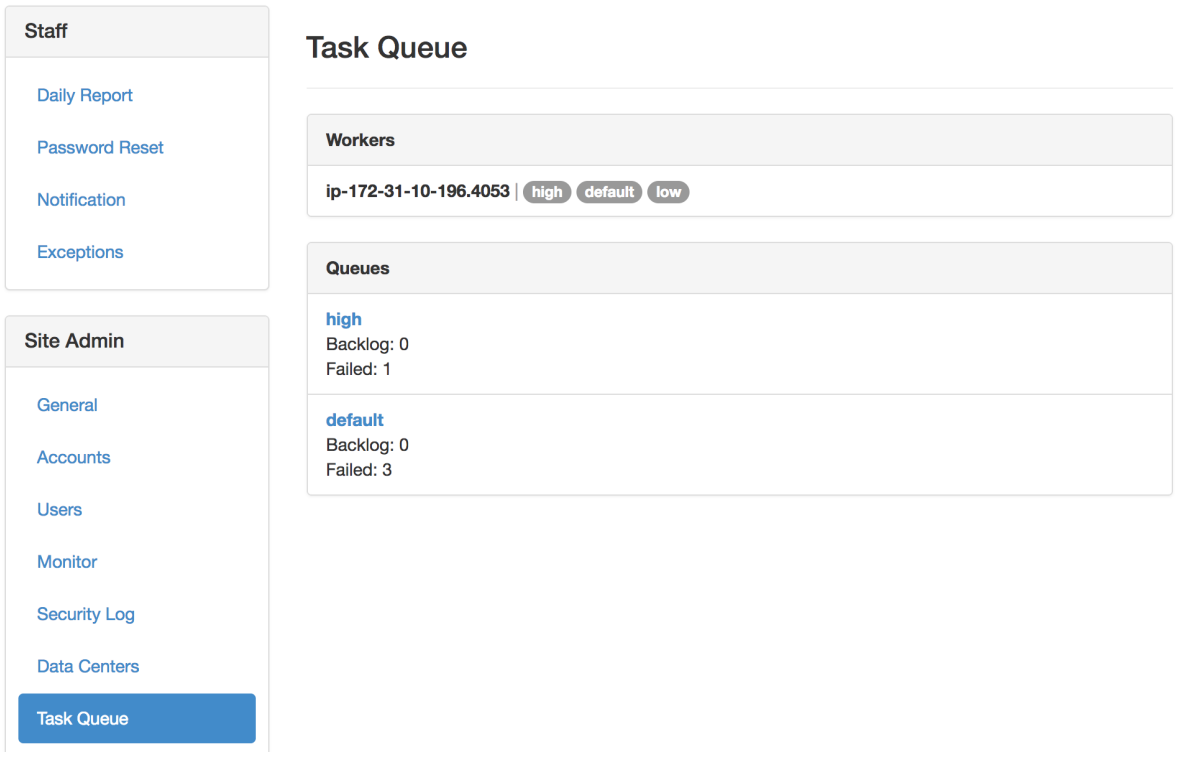
   The list includes columns for the application name, current running status, running node and last seen date.

3. Use the buttons to terminate or relaunch an application.

4. To view an application's logs, click the Logs button with the document icon.

Viewing the task queue

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Task Queue:



   The Workers section lists the workers in the task queue and whether each worker is set at high, default or low priority.

   The Queues section provides information on the default and high priority queues.

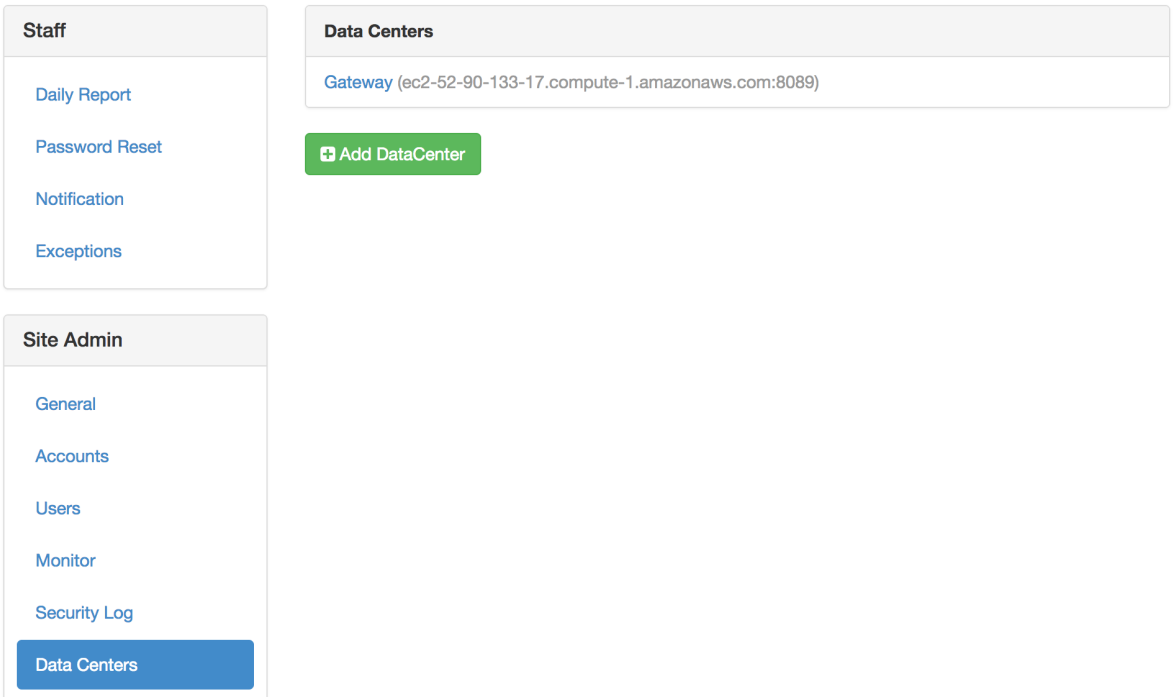
3. To view all the tasks in a particular queue, in the Queues section, click the queue name.

Checking node connections

When the AEN nodes cannot communicate with each other as intended, it can cause issues with you AEN platform installation.

Verifying server to gateway connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select Data Centers:



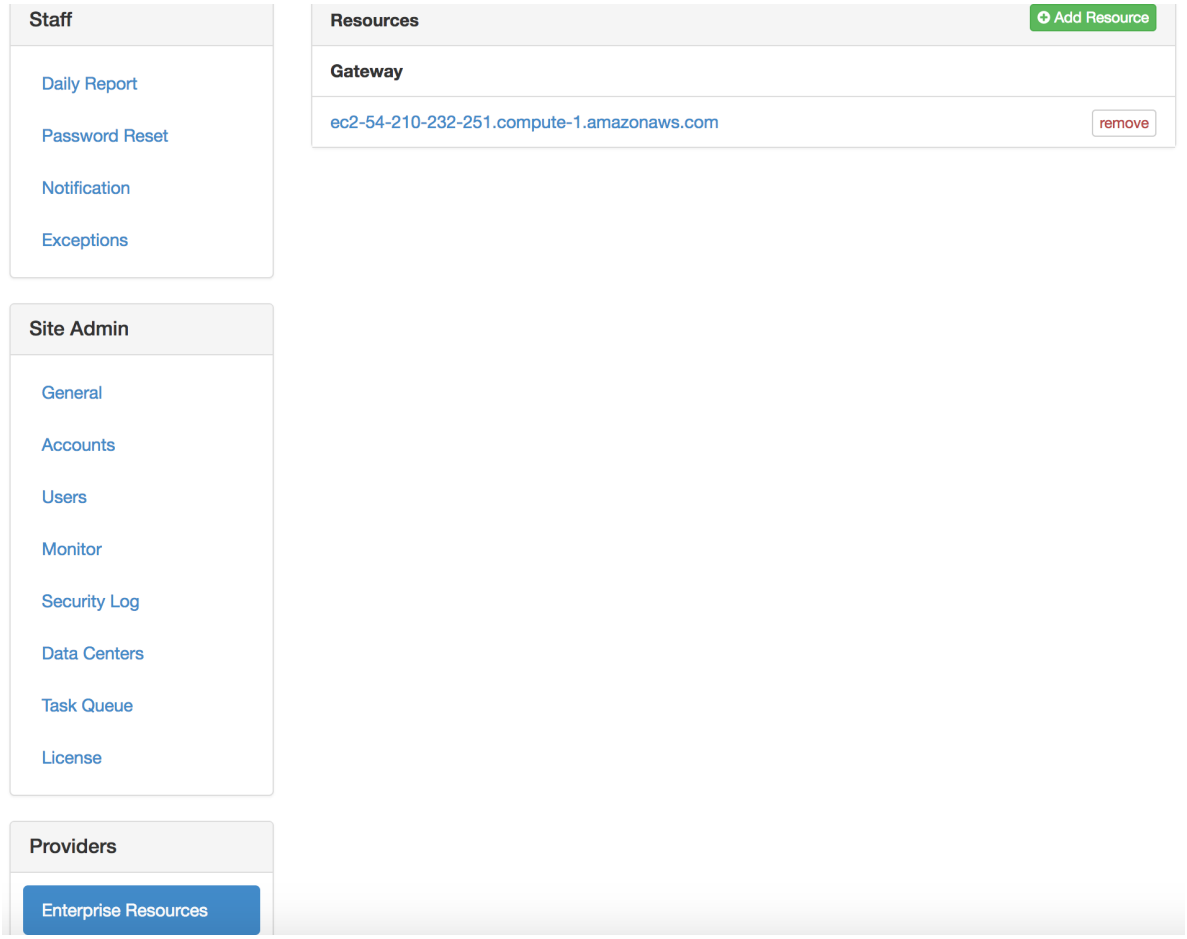
3. For each data center in the list, check connectivity from the server to that gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

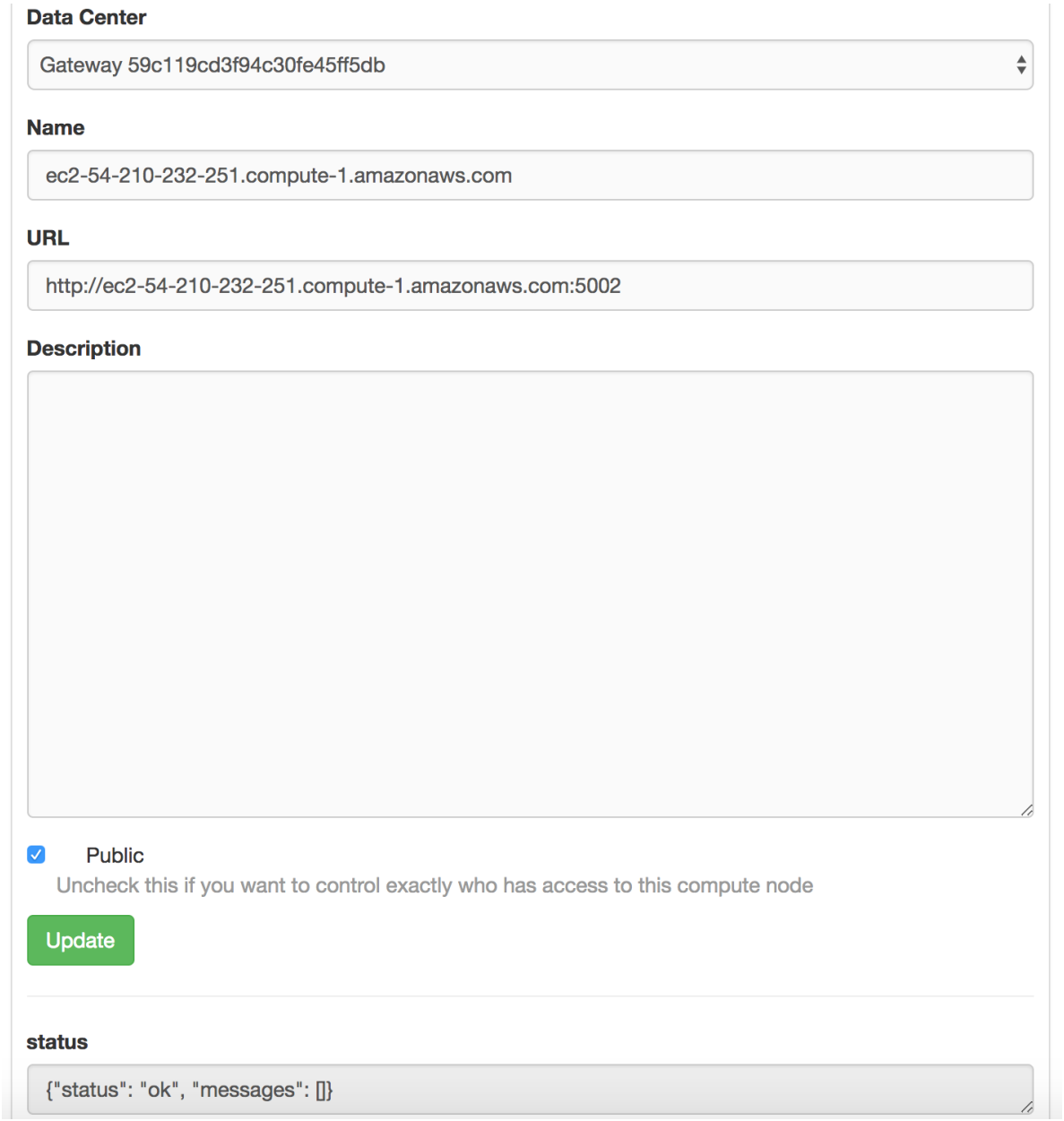
```
root@server # curl --connect-timeout 5 http://gateway.example.com:8089 > /dev/null
```

Verifying gateway to compute node connectivity

1. On the server, in the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Providers** menu, select Enterprise Resources:



3. Open each compute node in the Resources section.
4. Verify that the contents of the URL field begin with either `http` or `https`.



5. Check connectivity to that URL from the corresponding gateway.

   EXAMPLE: The gateway in this example is `http://gateway.example.com:8089`:

```
root@gateway # curl --connect-timeout 5 http://compute.example.com:5002 > /dev/null
```

Verifying gateway to server connectivity

The gateway-to-server path is used by the gateway configuration command `wk-gateway-configure`.

1. Verify that the gateway is linked to the correct server in the configuration file.
2. Verify that the full server URL is specified.
3. Check connectivity to the server:

```
root@gateway # grep WAKARI_SERVER /opt/wakari/wakari-gateway/etc/wakari/wk-gateway-
↪config.json
  "WAKARI_SERVER": "http://wakari.example.com",

root@gateway # curl --connect-timeout 5 http://wakari.example.com > /dev/null
root@gateway # curl --connect-timeout 5 http://error.example.com > /dev/null
curl: (7) Failed to connect to error.example.com port 80: Connection refused
```

4. If a connection fails:
    1. Ensure that gateways (data centers) and compute nodes (Enterprise Resources) are correctly configured on the server.
    2. Verify that processes are listening on the configured ports:

```
$ sudo netstat -nplt
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address   Foreign Address State  PID/Program
tcp        0      0 *:80            *:*             LISTEN 26409/nginx
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
tcp        0      0 *:5000          *:*             LISTEN 26192/python
tcp        0      0 127.0.0.1:27017 *:*             LISTEN 29261/mongod
tcp        0      0 *:22            *:*             LISTEN 986/sshd
tcp        0      0 127.0.0.1:25    *:*             LISTEN 1063/master
```

    3. Check the firewall setting and logs on both hosts to ensure that packets are not being blocked or discarded.

Verifying and tuning search indexing

For search indexing to work correctly, a compute node must be able to communicate with the server. To verify this:

1. Run:

```
curl -m 5 $AEN_SERVER > /dev/null
```

2. Verify that there are sufficient inotify watches available for the number of subdirectories within the project root file system:

```
cat /proc/sys/fs/inotify/max_user_watches
```

   NOTE: Some Linux distributions default to a low number of watches, which may prevent the search indexer from monitoring project directories for changes.

3. If necessary, increase the number of watches:

```
echo fs.inotify.max_user_watches=100000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

4. Verify that there are sufficient inotify user instances available—at least one per project:

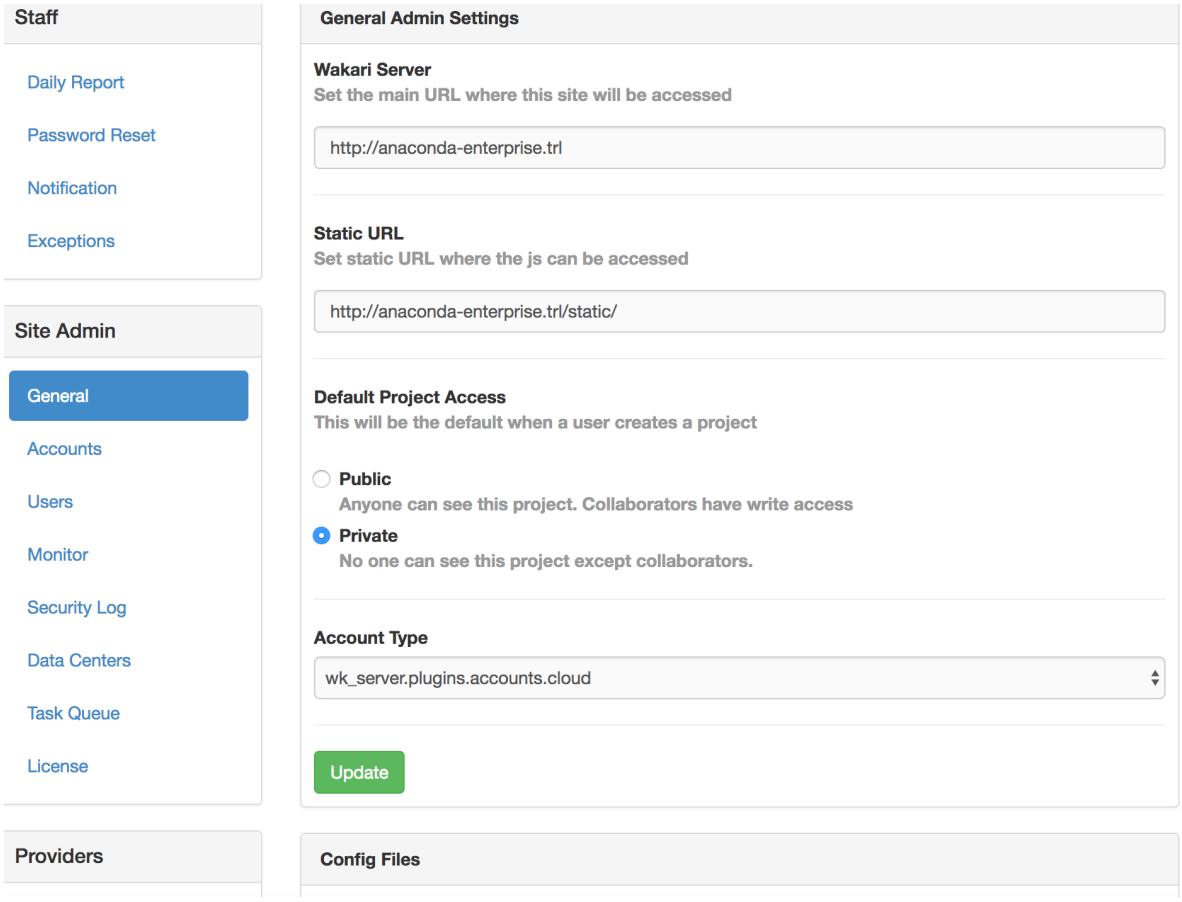
```
cat /proc/sys/fs/inotify/max_user_instances
```

5. If necessary, increase the number of inotify user instances:

```
echo fs.inotify.max_user_instances=1000 | sudo tee -a /etc/sysctl.conf && sudo␣
↪sysctl -p
```

Changing the AEN server URL

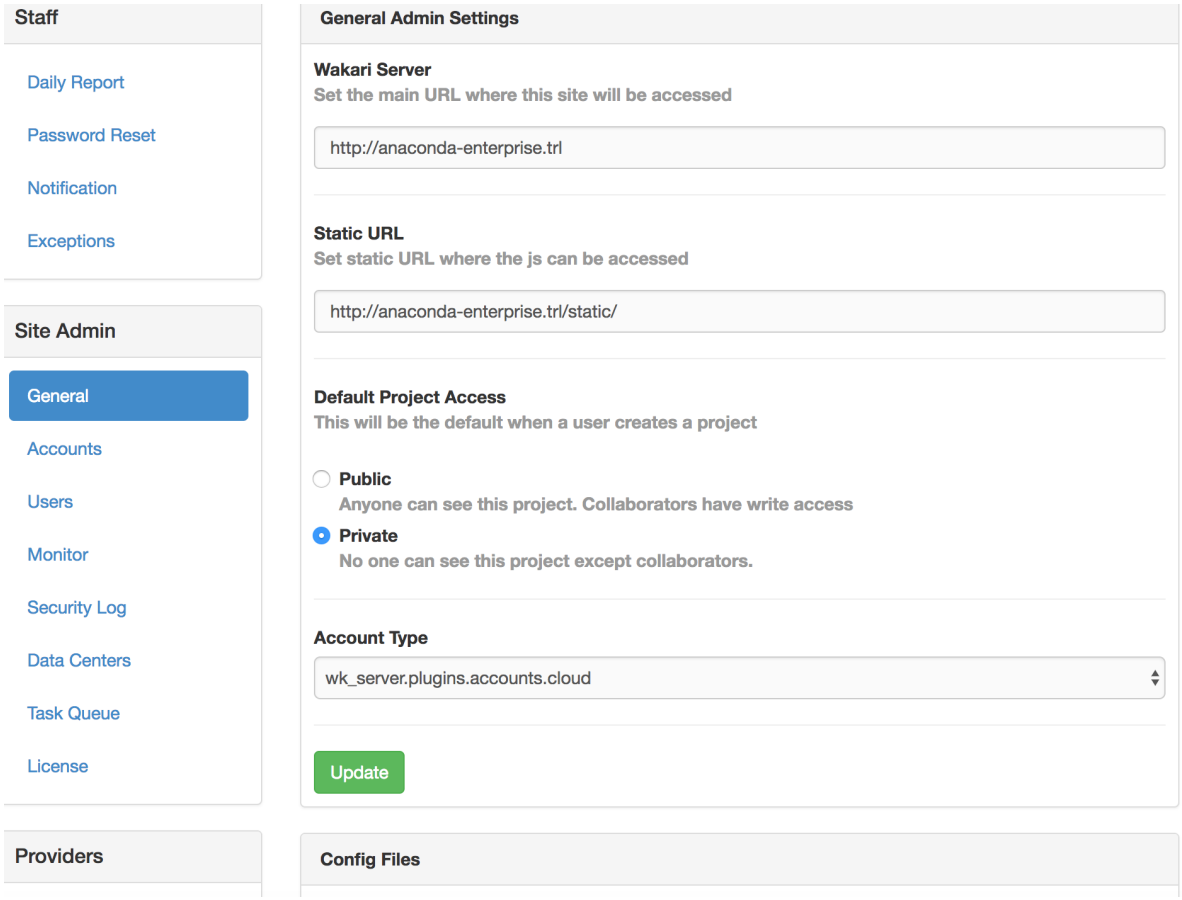
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Wakari Server box, type the main URL where the site can be viewed.
4. Click the Update button.

Changing the static URL for JavaScript files

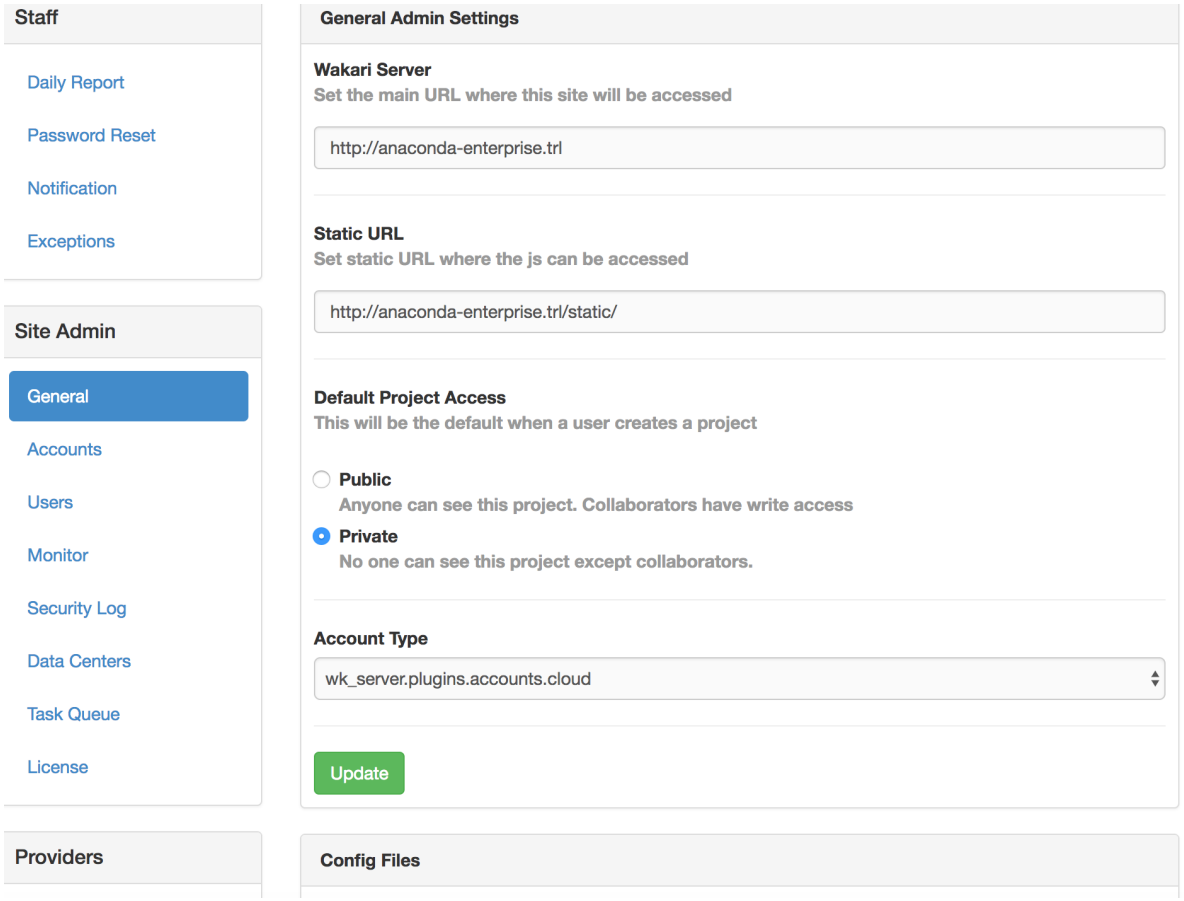
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Static URL box, type the static URL where JavaScript files can be accessed.
4. Click the Update button.

Changing the AEN account type

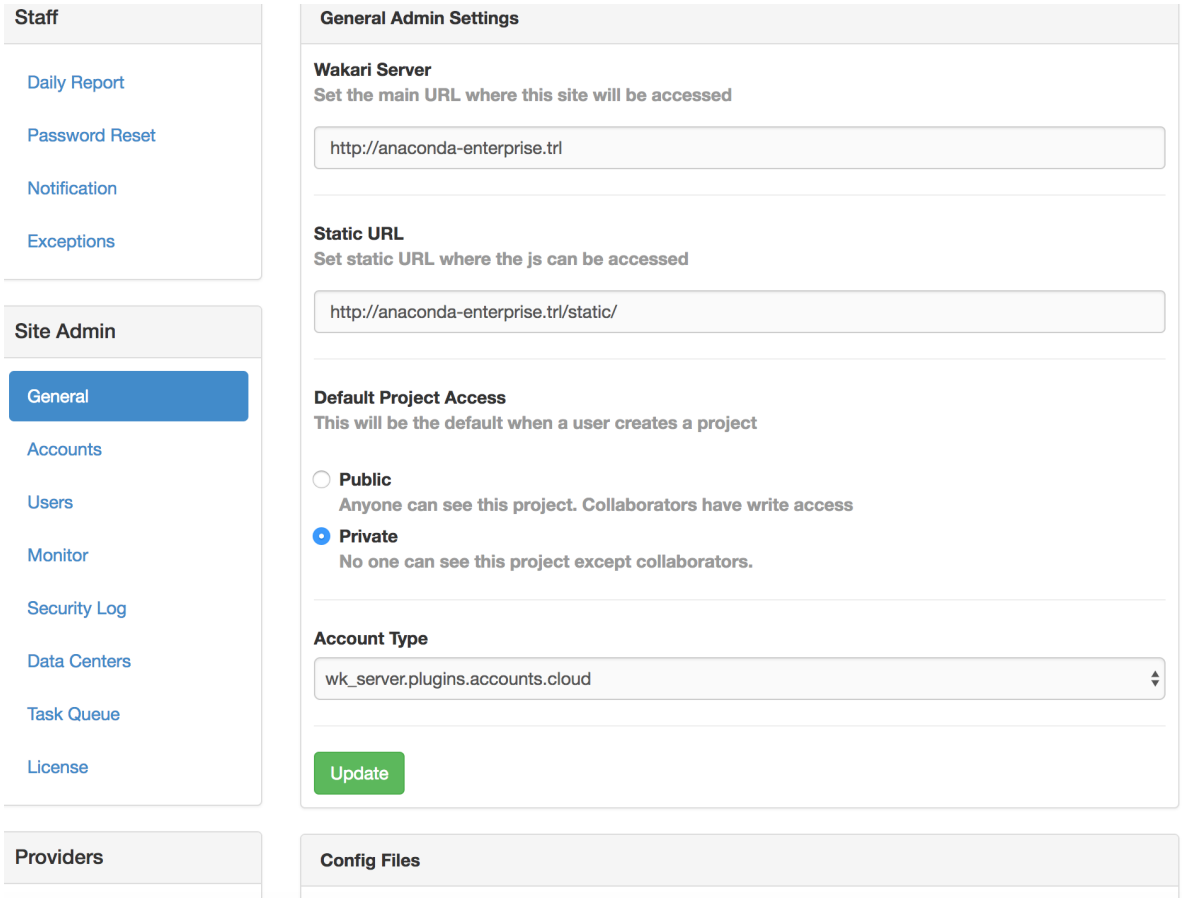
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. In the Account Type box, select the account type—cloud or LDAP.
4. Click the Update button.

Changing the default for project access

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General:



3. Under Default Project Access, select the default access type for new projects: Public or Private.
4. Click the Update button.

Changing the owner of a project

To change the owner of a project:

1. Collect the project name, the user name of the previous owner, and the user name of the new owner.
2. Run the `wakari-server` executable command `wk-server-admin`:

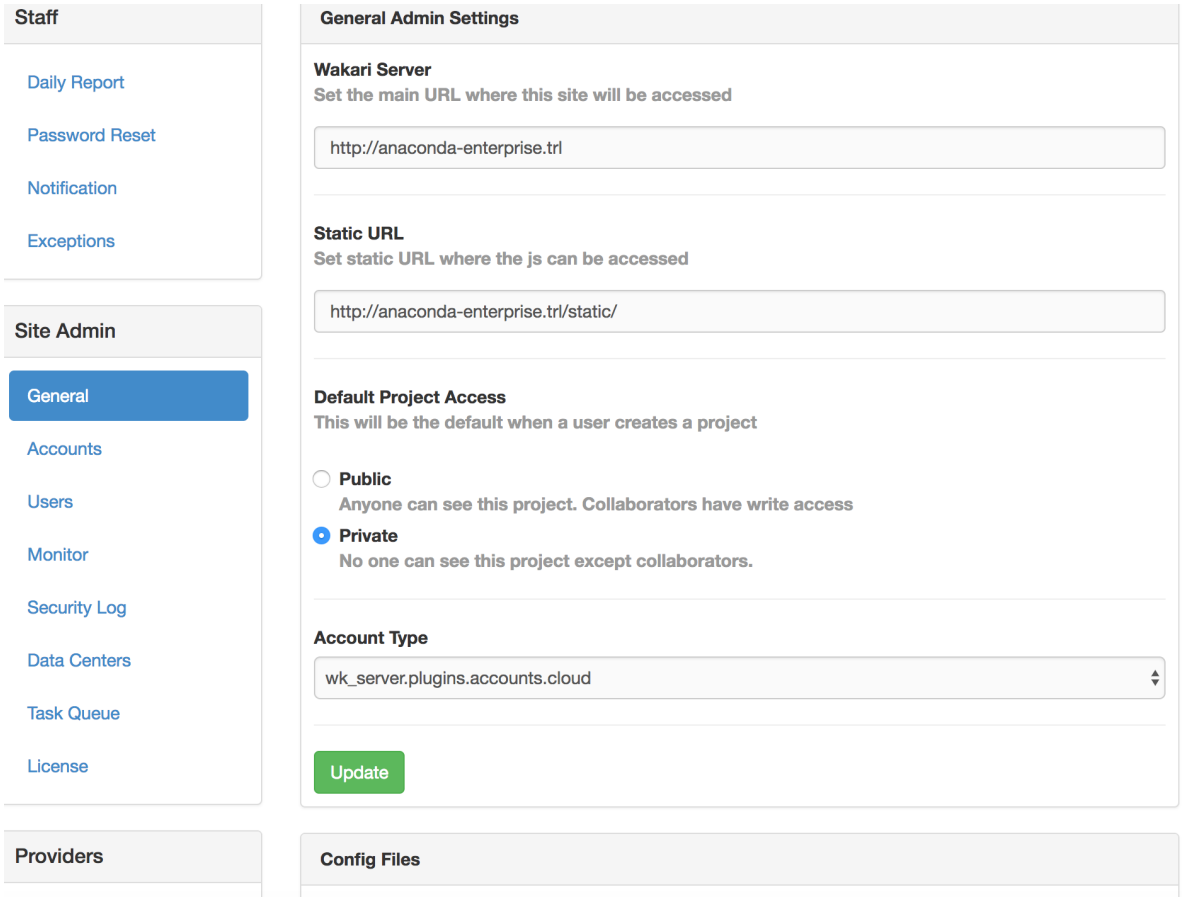
```
/opt/wakari/wakari-server/bin/wk-server-admin project-owner --project PROJECT --old␣
↪OLD_OWNER --new NEW_OWNER --delete --keep-owner
```

- PROJECT: The project name.
- OLD_OWNER: The user name of the previous owner.
- NEW_OWNER: The user name of the new owner.
- `--delete`: An optional flag that deletes the old project directory in the `projects` directory of OLD_OWNER. If this flag is not used, the old project directory is preserved but no longer used.
- `--keep-owner`: An optional flag that makes OLD_OWNER a collaborator of the project after it is transferred to NEW_OWNER. If this flag is not used, OLD_OWNER will no longer have collaborator access to the project.

NOTE: The OLD_OWNER user must still exist when the project's owner is changed. Before deleting any user, be sure to change the owner of the user's projects.

Editing configuration files

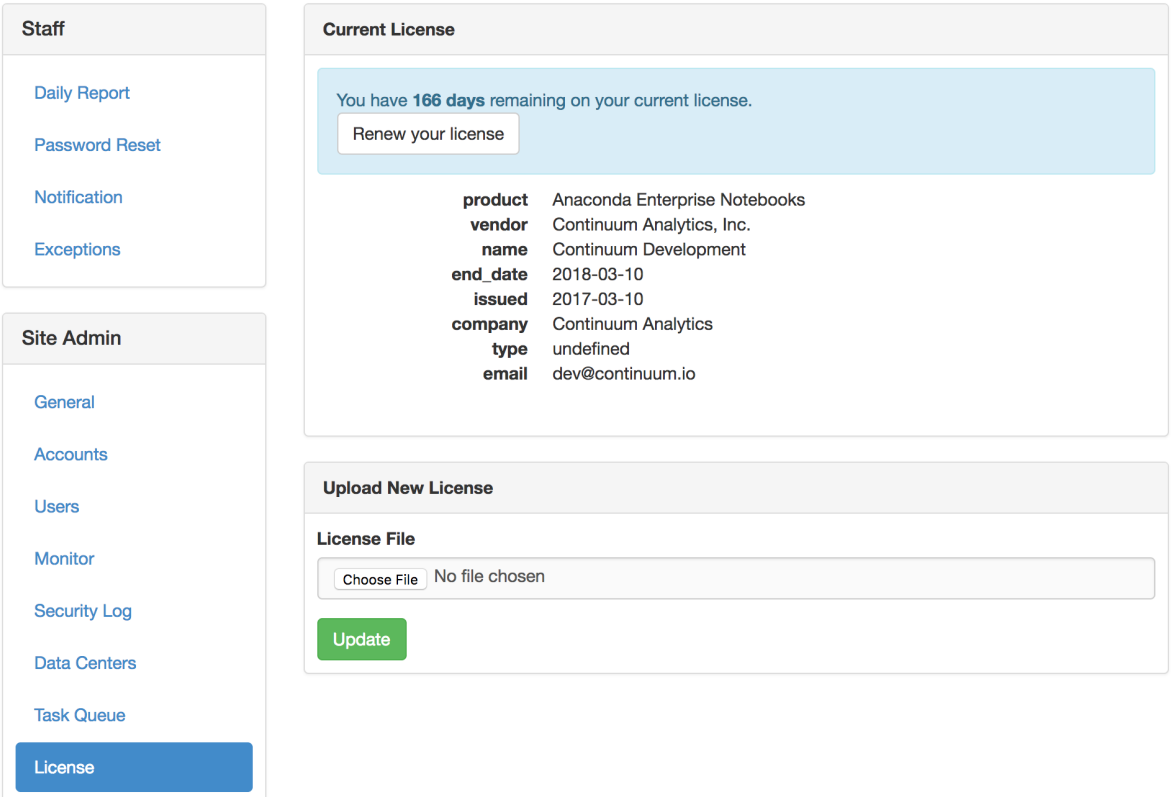
1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select General.



3. In the Config Files section, change the configuration settings for your AEN installation. For more information on configuration files, see *Using configuration files*.
4. Click the Update button.

Managing your AEN license

1. In the AEN navigation bar, click Admin to open the Admin Settings page.
2. In the **Site Admin** menu, select License:



The Current License section displays information regarding your AEN license, including the name of the product, vendor, license holder's name, end and issued dates, company name, license type, and contact email.

Renewing your AEN license

1. Click the Renew your license button.
2. In the Upload New License section, click the Choose File button.
3. Select the new license file.
4. Click the Open button.
5. Click the Update button.

   Your renewed license information is displayed.

Cheat sheet

The Admin dashboard includes three menus in the left column: **Staff**, **Site Admin** and **Providers**.

Staff menu

- Daily Report—See the number of users and projects.
- Password Reset—Reset a user password.
- Notification—Send system messages to users via SES or SMTP.
- Exceptions—If errors are raised while AEN is running, a red dot appears in the AEN navigation bar. Review errors and mark them as read.

Site Admin menu

- General—Change the configuration settings for your AE Notebook server installation.
- Accounts—Turns on or off Open Registration.
- Users—View usernames, number of projects and last logins.
- Monitor–View status of applications with related data, terminate or restart
- Security Log—View errors that could affect security.
- Data Centers—View current data centers and add a new data center.
- Task Queue—View workers in the task queue and priority.
- License—View current AEN license or upload a new license.

Providers menu

Enterprise Resources—View, add or remove local or cloud services and designate public or private to control access to a compute node.

Troubleshooting

This troubleshooting guide provides you with ways to deal with issues that may occur with your AEN installation.

General troubleshooting steps

1. Clear browser cookies. When you change the AEN configuration or upgrade AEN, cookies remaining in the browser can cause issues. Clearing cookies and logging in again can help to resolve problems.
2. *Make sure NGINX and MongoDB are running*.
3. Make sure that AEN services are *set to start at boot*, on all nodes.
4. *Make sure that services are running* as expected. If any services are not running or are missing, *restart them*.
5. *Check for and remove extraneous processes*.
6. *Check the connectivity between nodes*.

7. *Check the configuration file syntax*.
8. *Check file ownership*.
9. *Verify that POSIX ACLs are enabled*.

Browser error: too many redirects

Cause

Browser cookies are out of date.

Solution

1. Log out.
2. Clear the browser's cookies.
3. Clear the browser cache.
4. Log in.

Browser error: too many redirects when starting project apps

Browser shows "Too many redirects" when the user tries to start an application.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Exception: exceptions.TypeError: 'NoneType' object has no attribute '__getitem__'

This exception appears on the Admin > Exceptions page when a project does not have a Compute Resource assigned.

Cause

The project's Compute Resource is invalid or was deleted.

Solution

Move the project to a valid Compute Resource.

Error: unix:////opt/wakari/wakari-server/etc/supervisor.sock no such file

This is a supervisorctl error.

Cause

supervisord is not running on the Server.

Solution

Ensure that supervisord is included in the crontab. Then restart supervisord manually.

Error: "Data Center Not Found" when deleting a project

Cause

The data center has been removed.

Solution

As root, run:

```
/opt/wakari/wakari-server/bin/wk-server-admin remove-project --db-only <user> <project>
```

Forgotten administrator password

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin reset-password -u SOME_USER -p SOME_
   ↪PASSWORD
   ```

   NOTE: Replace SOME_USER with the administrator username and SOME_PASSWORD with the password.
3. Log in to AEN as the administrator user with the new password.

Alternatively you may add an administrator user:

1. Use ssh to log in to the server as root.
2. Run:

   ```
   /opt/wakari/wakari-server/bin/wk-server-admin add-user SOME_USER --admin -p SOME_
   ↪PASSWORD -e YOUR_EMAIL
   ```

NOTE: Replace SOME_USER with the username, replace SOME_PASSWORD with the password, and replace YOUR_EMAIL with your email address.

3. Log in to AEN as the administrator user with the new password.

Log files being deleted

Log files are being deleted.

NOTE: Locations of AEN log files for each process and application are shown in the node sections in *Concepts*.

Cause

AEN installers log in to `/tmp/wakari\_{server,gateway,compute}.log`. If the log files grow too large, they might be deleted.

Solution

To set the logs to be more or less verbose, Jupyter Notebooks uses Application.log_level.

To make the logs less verbose than the default, but still informative, set Application.log_level to ERROR.

Error: This socket is closed

You receive the "This socket is closed" error message when you try to start an application.

Cause

When the supervisord process is killed, information sent to the standard output `stdout` and the standard error `stderr` is held in a pipe that will eventually fill up.

Once full, attempting to start any application will cause the "This socket is closed" error.

Solution

To prevent this issue:

- Follow the instructions in *Managing services* to stop and restart processes.
- Do not stop or kill supervisord without first stopping wk-compute and any other processes that use it.

To resolve the "This socket is closed" error:

1. Stop wk-compute by running `sudo kill -9`.
2. Restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

Service error 502: Cannot connect to the application manager

Gateway node displays "Service Error 502: Can not connect to the application manager."

Cause

A compute node is not responding because the wk-compute process has stopped.

Solution

Stop and then restart the supervisord and wk-compute processes:

```
sudo /etc/init.d/wakari-compute stop
sudo /etc/init.d/wakari-compute start
```

502 communication error on Amazon web services (AWS)

You receive the "502 Communication Error: This gateway could not communicate with the Wakari server" error message.

Cause

An AEN gateway cannot communicate with the Wakari server on AWS. There may be an issue with the IP address of the Wakari server.

Solution

Configure your AEN gateway to use the DNS hostname of the server. On AWS this is the DNS hostname of the Amazon Elastic Compute Cloud (EC2) instance.

Invalid username

Cause

The username does not follow 1 or more of these rules:

- Must be at least 3 characters and no more than 25 characters.
- The first character must be a letter (A-Z) or a digit (0-9).
- Other characters can be a letter, digit, period (.), underscore (_) or hyphen (-).
- The POSIX standard specifies that these characters are the portable filename character set, and that portable usernames have the same character set.

Solution

Follow the above rules for usernames.

Notebook Error: Cannot download notebook as PDF via LaTeX

Cause

LaTeX is not properly installed.

CentOS/6 Solution

1. Install TeXLive from the TUG site. Follow the described steps. The installation may take some time.
2. Add the installation to the `PATH` in the file `/etc/profile.d/latex.sh`. Add the following, replacing the year and architecture as needed:

```
PATH=/usr/local/texlive/2017/bin/x86_64-linux:$PATH
```

3. Restart the compute node.

CentOS/7 Solution

1. Install the missing packages running the command:

```
yum install texlive texlive-xetex texlive-xetexconfig texlive-xetex-def texlive-
↪adjustbox texlive-upquote texlive-ulem
```

Unresponsive `wk-server` thread without error messages

Cause

Two things can cause the `wk-server` thread to freeze without error messages:

- LDAP freezing
- MongoDB freezing

If LDAP or MongoDB are configured with a long timeout, Gunicorn can time out first and kill the LDAP or MongoDB process. Then the LDAP or MongoDB process dies without logging a timeout error.

Solution

1. Check for frozen LDAP or MongoDB server processes.
2. You may also wish to configure the Gunicorn timeout to more than 30 seconds.

Unresponsive `wk-gateway` thread without error messages

Cause

If TLS is configured with a passphrase protected private key, `wk-gateway` will freeze without any error messages.

Solution

Update the TLS configuration so that it does not use a passphrase protected private key.

Error starting projects

Project's status page shows "There was an error starting this project".

Cause

Lack of disk space in compute nodes prevents projects from starting.

Solution

1. Verify that the project node meets the *system requirements*.
2. Check if there is enough free space on the compute node's partition where `/projects` lives:

```
df -h /projects
```

3. Free up some disk space to meet the system requirements.
4. Restart the project.

Changes in .condarc file are ignored

Changes applied to `.condarc` are ignored by conda.

Cause

Conda loads its configuration by merging multiple files together.

Solution

Check if you are applying the changes to the correct file.

To show the merged state that conda is currently using:

```
conda config --show
```

To show all config files that conda is currently reading:

```
conda config --show-sources
```

Frequently asked questions

What is AEN?

For information on AEN, see *Anaconda Enterprise Notebooks 4*.

Can notebooks be shared with anyone?

Yes. When you share a Jupyter Notebook through AEN, it can be viewed and run without the need to install anything special, regardless of what libraries were used to create the notebook. Each notebook also includes the python environment that it needs to run in.

AEN allows users to clone a shared Jupyter Notebook into their AEN account to make whatever changes or modifications they want. The notebook's Python environment is also cloned, so it runs in the same environment as the shared Jupyter Notebook unless it is changed.

Can I disable the option, "publish your notebook to anaconda.org"?

Yes. The upload button in the notebook app executes the option "publish your notebook to anaconda.org". To disable it, log in as the AEN_SRVC_ACCT and run these commands:

```
source activate /opt/wakari/wakari-compute
jupyter-nbextension disable nb_anacondacloud --py --sys-prefix
jupyter-serverextension disable nb_anacondacloud --py --sys-prefix
```

How can I check the version number of my AEN server?

Go to this URL in a browser: `http://$AEN_SERVER/admin/list`

NOTE: Replace `$AEN_SERVER` with the domain name or the domain name and port number of your AEN server.

Can I use AEN to access CSV or Amazon S3 data?

Yes. If your data is in CSV files, upload the CSV files to your AEN account using the upload controls in the File Browser of the Workbench Application or the File Transfer Application.

To access data stored on Amazon S3, use the Boto interface from AEN. See the public data files in AEN for examples of how to use Boto to pull your data from Amazon S3 into AEN. For more information, see Boto documentation.

You can also use IOPro to simplify and optimize the conversion of your data into Python arrays.

Can I install other Python packages?

Yes, by creating a custom environment for your packages within your project.

For more information, see *Using the NBConda extension*.

Can I create a Python environment from the command line?

Yes, you can use the `conda create` command to create custom Python environments with whatever packages you choose. All AEN environments are shared with all the team members of a project.

EXAMPLE: In this example, myenv is a new environment containing the NumPy package.

```
conda create -n myenv numpy
```

NOTE: Python, Jupyter Notebooks and PIP are installed by default in all new AEN environments.

To use your new environment, activate it by running `source activate myenv`.

Can I connect to GitHub with AEN?

Yes, you have full access to GitHub through an AEN Terminal application.

To generate an SSH key from your AEN account and add it to your GitHub account:

1. Generate a GitHub SSH key.
2. Copy your key by running `cat ~/.ssh/id_rsa.pub`.
3. Select and copy the contents of the `id_rsa.pub` file to the clipboard.
4. Follow GitHub's instructions to go to your GitHub account and paste it from your clipboard into the appropriate box in your GitHub settings.

Can I print or print preview my Jupyter Notebooks?

Yes, you can print your notebooks using your browser's regular printing capabilities.

You can also preview the printed page by clicking the **File** menu and selecting Print Preview.

Is there a set amount of storage on AEN?

No, there is no set limit for storage in AEN. You are limited only by the size of the disk where AEN is installed.

If you need more storage, contact your system administrator.

How do I get help, give feedback, suggest features or report a bug?

See *Help and support*.

Help and support

Priority support is included with the purchase of an Anaconda subscription.

Contact your administrator first if you are having problems. Your administrator has a service level agreement where your issue will be responded to within a specific response time, depending on type and severity.

Training and consulting

Training and consulting is available for AEN and any other Anaconda product.

For more information, please contact your account representative or email the sales team.

Providing feedback

Your feedback is very important to us!

Please, send us any product feedback while you are thinking about it.

TIP: Be sure to select AEN as the Platform Component Name.

Submitting feature requests

We'd love to hear your ideas for consideration in future releases!

Your ideas help us build a better product. Your administrator can submit a support ticket for you.

NOTE: You can also request new features by using the product feedback form.

Reporting a bug

If you think you have found a bug, please contact your administrator immediately. They will open a support ticket for your issue.

Additional resources

The following resources are useful for getting started with Jupyter Notebooks:

- Jupyter Notebook quick start guide
- Jupyter Notebook user documentation
- GitHub shows the most popular Jupyter notebooks of the month, week, and day.

Release notes

v4.2.2 March 1, 2018

Administrator-facing changes:

- Add admin command to change project owner
- Server: Add ability to disable public projects
- Gateway: Add support for SSL private key passphrase
- Docs: Add backup and restore runbook to the docs
- Docs: Emphasize backups before upgrading process
- Docs: Recommend putting AEN and projects folder on the same filesystem
- Docs: Add RHEL version 7.4 to supported versions
- Docs: Add troubleshooting instructions to fix problems when downloading notebook as PDF via LaTeX

User-facing changes:

- Upgrade bokeh to version 0.12.7
- Upgrade holoviews to version 1.8.3
- Upgrade numba to version 0.35.0
- Upgrade scikit-learn to version 0.19.0

Internal fixes:

- Fix bug in init scripts when requiretty is enabled
- Fix bugs related to AEN_SUDO_SSH option
- Fix bug in fix_ownership function when directories contain spaces
- Docs: Fix error in Active Directory configuration example
- Server: Fix bug when updating user/group in supervisor configuration files in post-install for server and gateway
- Server: Fix bug Admin reports on user totals are inconsistent
- Server: Fix error in login screen when open registration and LDAP are enabled
- Server: Fix bug in Last seen date

- Server: Fix bug Monitor Report blank
- Server: Load JS files from local CDN
- Server: Fix error when terminating or relaunching an application from Monitor
- Server: Fix error creating projects when using Internet Explorer 11
- Compute: Fix 404 errors when using pivottablesjs
- Remove Wakari Cloud leftovers

v4.2.1 December 18, 2017

Administrator-facing changes:

- None

User-facing changes:

- None

Internal fixes:

- Fix undetected "ca" key when using self-signed certificates signed by a private CA
- Fix login redirects when using SSL
- Add verify gateway SSL certificate for get and post requests

v4.2.0 November 22, 2017

Administrator-facing changes:

- Feature/allow remote MongoDB
- Allow for configuration for login timeout and set default
- Add verbose option to conda create clone
- Avoid duplicate name for resources / compute-nodes
- Allow renaming main and message queue databases
- PAM-based authentication module
- Change wakari logos to Anaconda logos
- Replace 'wakari' wording
- New config option to move the user's home directory into the user's project directory
- Make logging less verbose in AEN
- Documentation for PySpark kernel installation
- Improve SSL documentation

User-facing changes:

- New config option to move the user's home directory into the user's project directory
- Package cache was moved from user's home directory into the user's project directory
- Change wakari logos to Anaconda logos

- Fix error for deleting tags to work
- Define shell prompt in `.projectrc` template
- Replace 'wakari' wording

Internal fixes:

- Move server unix socket from `/tmp` to `/opt/wakari/wakari-server/var/run`
- Make project deletion synchronous for consistency
- Avoid storing `csrf` token in the user profile
- Expire gateway session when server logs out
- Allow log rotation in the three components
- Fix permissions on static files
- Change log level to debug in gateway
- Do not log private keys in gateway
- Save request remote address when logging action
- Unify logs formatting and timezone in compute nodes with Winston
- Several fixes and documentation improvements

v4.1.3 August 16, 2017

- Upgrade conda to version 4.3.24
- Upgrade anaconda to version 4.4.0
- Admin application monitor
- Block access to package list view
- Add placeholders in password reset form
- Change static content location
- Fix error when checking for package updates in notebook application
- Replace slashes in project tags
- Fix submit errors in password reset form
- Replace/remove "wakari" word from multiple places
- Fix missing commands missing sudo in start-project
- Improve gateway and compute node validators
- Check if bzip2 is installed during server setup process
- Include port number in host header
- Forbid creation of empty tags
- Repair "Create Account" link in login page
- Use UTC for server logs
- Mark datacenters as trusted by default
- Disable heart beating

- Compute resource: Show full path to log file
- Improve init scripts
- Allow deleting all projects
- mtq: Implement exponential backoff on connection error to mongodb
- In the general admin display, do not show the bind password for LDAP
- The accelerate package has been removed from the installation
- Other minor bugfixes

v4.1.2 March 29, 2017

This is mainly a maintenance release improving internal machinery and upgrading the root packages.

- Upgrade conda to version 4.3.14
- Upgrade Anaconda to 4.3.1
- Upgrade r-base to 3.2.2
- Fixed AEN nb_conda to be compatible with conda 4.3.x series
- Several documentation fixes
- Other minor bugfixes

v4.1.1 December 15, 2016

- Added CentOS 7 support
- Support dots in usernames
- More usernames validation
- Fixed creation (through nb_conda) of single letter environment names
- Environment names (through nb_conda) validation
- Fixed uploading of notebook using nb_anacondacloud
- Fixed attaching of environments in published notebooks through nb_anacondacloud
- Several documentation fixes
- Other bugfixes

v4.1.0 October 21, 2016

- Added JupyterLab application
- Removed GateOne terminal application
- Included additional notebook extensions (`nbpresent` and `nb_anaconda_theme`)
- Updated to conda 4.2.9 in default project environments
- Added HTTP timeout setting for gateway and compute launcher
- Changed default gateway port to 8089

- Added support for all-numeric usernames
- Add R channel to default conda configuration file
- Other bugfixes

v4.0.0 June 30, 2016

- Customized installation with:
  - AEN Functional ID and Group
  - AEN (installation and run) `sudo` commands
  - Removal of root access from the AEN service account
  - Configurable sudo command
  - Restriction of sudo access to all the processes
- Upgrade Jupyter to 4.2
- Upgrade the anaconda-nb-extensions to the latest versions
- Upgrade Anaconda to 4.0
- Deprecate wakari-publisher
- Security enhancements
- SSL configuration documented between all AEN Server components
- Several bugfixes
- Overall documentation revision and general improvement

v0.10.0 February 2, 2016

- New projects dashboard
- Capability to star and tag a project
- Sticky searches
- New Jupyter Notebook extensions
- Updates to all packages. Highlights: bokeh 0.11, ipython/jupyter 4.1.

v0.9.1 October 19, 2015

- New Search capability to find projects and files within a project.
- Added "Related Projects" list to the project view, based on code similarity.
- New UI for fine-grained access control of project files in the Workbench app
- Viewer app now renders plain text files correctly
- Updated LDAP configuration docs
- Updates to all packages. Highlights: bokeh 0.10, ipython/jupyter 4.0.

Note ElasticSearch, and an Oracle JRE, must be installed on the server in order to use the new search features. Indexing of project files will begin when the project is started (or paused and re-started). If search features are not desired, set `"SEARCH_ENABLED": false` in the server configuration file to avoid errors.

v0.8.0 August 21, 2015

New Features

- Updated packages based on Anaconda 2.3, and removed older packages no longer in Anaconda.
- Updated IPython to version 3.2.1
- Documentation is now installed with the server (use the Help link in the top navigation bar)
- Added the ability for the administrator to define a customized default project environment.
- The server has been updated to use python 2.7.10.
- Init scripts are now provided for each Anaconda Enterprise Notebooks service.
- Added relevant links to some error pages

Problems Resolved in this Release

- Project status indicators (e.g. starting, pausing) now automatically update.
- If an access is unauthorized, the server now returns a 403 (Unauthorized) status code and prompts the user to log in.
- Modified nginx configuration to support running the server on non-standard ports.
- The server installation no longer uses a default password for the wakari user. A random password is generated and displayed during installation.
- Prevent double-click from attempting to create a project twice
- Removed an obsolete script reference that was causes a 404 error to be logged in the browser console when opening the Terminal app.
- The installer scripts no longer fail if the database already contains the 'wakari' user.
- Updated example notebooks to work with latest Bokeh release.
- Fixed terminal app key bindings to allow Mac command key to work normally
- Installers now indicate where the installation logs are stored
- LDAP user attributes containing binary data are now ignored.

Documentation Updates

- Updated and consolidated Troubleshooting guide.
- Simplified some steps in the installation procedure.
- Updated notebooks in the Examples directory for use with the latest IPython Notebook and Bokeh.
- Added a section on project permissions to the Troubleshooting guide.
- Added notes on how to remove a project if the datacenter has already been removed.

v0.7.0 June 12, 2015

New Features

- Updated Bokeh to v0.9
- Ability to list packages installed on the server
- Administrators now have full access to all projects.
- Added automated checking and display of connection status between server, data centers, and compute resources.
- When creating a new project, an environment for the project is automatically created as a clone of the root Anaconda environment.

Problems Resolved in this Release

- Problem with checking in files with revision control extension
- Revision control extension can't handle notebook names with spaces
- Problem moving files form one compute node to another if configured for LDAP
- Should default to UTF-8 encoding and warn user if no locale is detected
- Adding a compute resource via the command line admin tool does not work
- The installer now sets `umask 0022` to ensure correct file permissions

Documentation Updates

- Added a *Troubleshooting* section to the documentation.
- Added notes on how to configure crontab to start the Anaconda Enterprise Notebooks services at startup
- Example SSL config file now has correct log paths
- Added instructions on how to ensure that POSIX ACL support is enabled on the projects directory.
- Fixed syntax problem in sample LDAP config.json
- Added section on how to use self-signed or private CA certificates

v0.6.3 March 27, 2015

- Updated LDAP module
- LDAP user filtering
- Added Notebook locking
- Added Notebook integrated revision control system
- Move projects between compute nodes
- User-specific binding to compute nodes (private compute nodes)
- Improved installation process and dependency checking
- Incorporated support for SSL for Server and Gateway nodes

- Improved Gateway error handling
- Fixed package dependencies for update process
- Documentation updates

Previous versions

Previous version documentation is provided for users who have not yet upgraded to the current version of AEN.

- *AEN 4.2.1*
- *AEN 4.2.0*
- *AEN 4.1.3*
- *AEN 4.1.2*

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After you've run through the *Getting started guide*, you're ready to learn the details of using Anaconda Enterprise Notebooks.

Basic

These topics all use the web browser to manage your projects. They are suited for a beginning user.

Projects (AEN 4.1.2)

Using applications (AEN 4.1.2)

Workbench Application (AEN 4.1.2)

Viewer Application (AEN 4.1.2)

JupyterLab Application (AEN 4.1.2)

Terminal Application (AEN 4.1.2)

Jupyter Notebook Application (AEN 4.1.2)

Compute Resource Config Application (AEN 4.1.2)

Team Collaboration (AEN 4.1.2)

Account Administration (AEN 4.1.2)

Advanced

If you are comfortable entering commands on the command line, there is a lot more you can do with Anaconda Enterprise Notebooks.

Anaconda Environments (AEN 4.1.2)

Data (AEN 4.1.2)

Visualization (AEN 4.1.2)

Project environment variables (AEN 4.1.2)

Help & support

Help and support (AEN 4.1.2)

Frequently Asked Questions (AEN 4.1.2)

Additional Resources (AEN 4.1.2)

Sharing in Anaconda Enterprise Notebooks (AEN 4.1.2)

Administration (AEN 4.1.2)

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Start/Shutdown (AEN 4.1.2)

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Install Steps

Carry out the procedures linked from the table below to perform a complete install of all Anaconda Enterprise Notebooks components.

Installation preparation (AEN 4.1.2)

Install AEN Server (AEN 4.1.2)

Install AEN Gateway (AEN 4.1.2)

Install AEN Compute (AEN 4.1.2)

The following optional install procedures may need to be performed, depending on how you set up your Data Center:

Optional configuration (AEN 4.1.2)

Sudo configuration (AEN 4.1.2)

LDAP configuration (AEN 4.1.2)

SSL (AEN 4.1.2)

wakari_https.conf (AEN 4.1.2)

Single sign on (AEN 4.1.2)

Additional post-install information:

Upgrading Anaconda Enterprise Notebooks (AEN 4.1.2)

Uninstall (AEN 4.1.2)

Release notes (AEN 4.1.2)

Using Anaconda Distribution with AE4

Anaconda Distribution includes two options for package and environment management on local systems, the Conda command line program, and the Anaconda Navigator graphical interface. If Anaconda Enterprise users will use either of these options, there are a few items you might want to configure:

Configuring firewall settings

If platform users will use Navigator **online**, you may need to whitelist the necessary sites in your network's firewall settings so that Navigator can reach these sites:

- https://repo.anaconda.com (or for older versions of Navigator and Conda, https://repo.continuum.io)
- https://conda.anaconda.org for conda-forge and other channels on anaconda.org
- https://vscode-update.azurewebsites.net/ for updating Visual Studio Code
- google-public-dns-a.google.com (8.8.8.8:53) to check internet connectivity with Google Public DNS

If platform users will use Navigator **offline**, conda environment creation will be limited to the packages available in their package cache. Using Navigator in offline mode is equivalent to using the `create`, `install`, `remove`, and `update` conda commands with the `--offline` flag so that conda does not connect to the internet. If your users will use Navigator offline, you may want to *change the Navigator icons* that link to the web.

NOTE: If Navigator detects that internet access is not available, it automatically enables offline mode. Users can also select **Anaconda Navigator > Preferences** and check the `Enable offline mode` option to work in offline mode any time, even when internet access is available.

Configuring conda

If platform users will use conda to install packages, they can configure conda to search a specific set of channels for packages.

As an Administrator, you can also configure conda at the system level, which will override any user-level configuration.

Configuring Navigator

By default, Navigator includes icons linking to the GitHub, YouTube, and Twitter pages of Anaconda Inc. *Users* can change or remove these links by editing the configuration file located here: `HOME_DIR/.anaconda/navigator/anaconda-navigator-config.yml`.

The configuration file uses key-value pairs in the form `key: value`, such as `github_url: https://github.com`. Each of the three values `github_url` `youtube_url` and `twitter_url` may be set to any URL or `null`. If the value is `null`, Navigator does not display that icon.

As an Administrator, you can create a configuration file for Navigator to enable users to access the Anaconda Enterprise 4 Repository and set additional parameters that are not exposed in the preferences dialog. This main configuration file stores *all user preferences* for Navigator, and is located here: `~/.anaconda/navigator/anaconda-navigator.ini`.

The configuration file includes `main` and `home` sections, each containing sets of key-value pairs in `.ini` format.

You can use it to customize the following options in the `main` section:

- `default_anaconda_api_url`: This points to the internal Anaconda Enterprise 4 Repository API endpoint.

NOTE: This URL must end with `/api`— it is not simply the homepage of your instance. This API reads the configuration data from your instance to set UI behavior and text, such as the **Sign in to...** link in the the top right corner of the Navigator window.

- `default_ssl_certificate` — This can be set to `True`, `False`, or a path to an existing and valid SSL certificate file.

NOTE: If your Anaconda Enterprise 4 Repository instance requires an SSL cert/RSA key to access it, that information must exist in a text file on the user's machine, *and pointed to via the path specified here* in the `.ini` file. The format for the text file should resemble the following:

```
-----BEGIN CERTIFICATE-----
```

<actual cert here>

```
-----END CERTIFICATE-----
-----BEGIN RSA PRIVATE KEY-----
```

<actual key here>

```
-----END RSA PRIVATE KEY-----
```

- `twitter_url` — This can be configured to point to your company's account, or be set to `None` to display no icon.
- `youtube_url` — This can be configured to point to your company's account, or be set to `None` to display no icon.
- `github_url` — This can be configured to point to your company's account, or be set to `None` to display no icon.

And set this option in the `home` section:

- `vscode_enable` — This can be set to `True` or `False`, based on whether you want to enable or disable VSCode from appearing on the Home tab and making queries to the Microsoft endpoint from within the application.

For example:

```
```ini
[main]
default_anaconda_api_url = https://www.your-domain.com:8443/api
default_ssl_certificate = /path/to/certificate/file.pem

# Custom URLS
twitter_url = https://twitter.com/your-company
youtube_url = https://www.youtube.com/c/your-company
github_url = https://github.com/your-company

[home]
vscode_enable = False
```
```

After making your changes, save and close the `.ini` file, then launch Navigator to update the `.condarc` and `anaconda-client` configurations to reflect the customized settings you've specified within it.

2.18.13 Anaconda API

Automate and integrate user, token, channel, and policy management into your application with our API. The Anaconda API follows the general patterns of REST.

Managing your organization using the Anaconda Cloud API

Manually onboarding individual team members through the Anaconda Cloud graphical user interface (GUI) can be time consuming. For large teams, Anaconda recommends using API calls for a streamlined process.

The Anaconda Cloud API provides various calls to enable you to add users to an Anaconda Cloud organization and change their seat and token permissions. **You must be an admin of an Anaconda Cloud organization with an active paid subscription to use these API calls.**

Interacting with the API

Anaconda maintains a Jupyter notebook that contains Python functions for interfacing with the API, along with some instructions for using the notebook itself:

Authenticating to the API

The Anaconda Cloud API uses OAuth2 standard authentication (with an organization admin's anaconda.cloud username and password) to generate a `User_Token`. A `User_Token` is required to create a service account.

Once a service account is created, use its credentials (the returned `client_id` and `client_secret`) for authentication in order to generate a `ServiceAccount_Token` to manage users via the other API calls described below.

Creating a service account

Creating a service account allows an admin user to specify credentials for a specific machine or machines (like a build server or other machine for pipeline automation) and manage those machines in a similar capacity to a user. The service account can then allow the other API calls to be made directly to the organization the machine user is a part of.

You can create as many service accounts per organization as you need. However, Anaconda recommends limiting the number of service accounts to no more than is absolutely necessary. Restricting the number of service accounts enhances your organizations security posture.

Note: Service account names must be created using lower case letters, numbers, hyphens, or underscores, and cannot contain spaces or special characters.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
POST /organizations/<ORG_ID>/service-accounts
```

Request

```
{
   "name":"<SERVICE_ACCOUNT_NAME>"
}
```

Request Example

```
{
   "name":"anaconda_cloud_org"
}
```

Response

```
{
   "name": "<SERVICE_ACCOUNT_NAME>",
   "client_id": "<GUID>",
   "org_id": "<GUID>",
   "client_secret": "<SECRET_ID>"
}
```

Response Example

```
{
   "name": "anaconda_cloud_org",
   "client_id": "1234abcd-1a2b-3c4d-5e6f-123456abcdef",
   "org_id": "abcd1234-1234-abcd-1a2b-3c4d5e6f7g8h",
   "client_secret": "1234567890abcdefghij_abcdefghij1234567_1a2b"
}
```

Get service account ID

This call returns the ID of a previously created service account, but it will not reveal its secret.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
GET organizations/<ORG_ID>/service-accounts
```

Response

```
{
   "name": "<SERVICE_ACCOUNT_NAME>",
   "client_id": "<GUID>",
   "org_id": "<GUID>",
}
```

Response Example

```
{
   "name": "anaconda_cloud_org",
   "client_id": "1234abcd-1a2b-3c4d-5e6f-123456abcdef",
   "org_id": "abcd1234-1234-abcd-1a2b-3c4d5e6f7g8h",
}
```

Deleting a service account

This call deletes the service account associated with the supplied `client_id`.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <CLIENT_ID> with your client_id value
DELETE organizations/<ORG_ID>/service-accounts/<CLIENT_ID>
```

There's no request or response information for this call. You will receive a 204 status code if the request is successful.

Automated Onboarding of new users

If you are adding users to your organization that do not already have an anaconda.cloud account, you can use this call to initiate the automated onboarding process, which will add them to your organization, assign them a seat as a member, and issue them a token for access to the repository.

Admins will receive an email that the users have been added to the organization. Users will receive two emails, one welcoming them to the organization, and one containing their private access token, which allows them to use packages from anaconda.cloud.

Request

```
{
   "user_emails":"[<user_email@example.com>, <user2_email@example.com>]"
}
```

Request Example

```
{
   "user_emails":"[annie_conda@anaconda.com, super_snake@anaconda.com]"
}
```

Response

```
{
   "users_in_onboarding_process": [
      "user_email@example.com" "user2_email@example.com"
   ],
   "users_unavailable_for_onboarding": [],
   "total_organization_seats": "<TOTAL_SEATS>",
   "available_organization_seats": "<REMAINING_SEATS>"
}
```

Response Example

```
{
   "users_in_onboarding_process": [
      "annie_conda@anaconda.com" "super_snake@anaconda.com"
   ],
   "users_unavailable_for_onboarding": [],
   "total_organization_seats": "1000",
   "available_organization_seats": "921"
}
```

Caution:

- If a user has an anaconda.cloud account associated with their email address, automated onboarding will fail.
- If users listed under `users_in_onboarding_process` have started the onboarding process, any issues that occur during onboarding will not be reflected here. You will know there is an issue if a user did not get added to your organization.
- If the number of available seats are less than the number of members you are attempting to add to your organization, users will be added until seats are no longer available, and the remaining users are shown in the `users_unavailable_for_onboarding` list.

Adding a user to your organization

This call adds users to the organization.

If you do not provide an email address when making this call, the system creates an organization-managed user instead. Organization-managed users are not linked to individual accounts and are intended for programmatic use, allowing tokens to be generated specifically for automated processes or integrations.

You can create as many managed users as needed. However, Anaconda recommends limiting the number of managed users to only what is required. Restricting their use enhances the security posture of your organization.

Tip: When making requests to create organization-managed users, use the <FIRST_NAME> and <LAST_NAME> fields to provide a descriptive name for the token's intended purpose. For example, if you are providing a token to a Jupyter Notebooks server, you might enter "Jupyter" and "Server-1" as a first and last name for the organization-managed user.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
POST /organizations/<ORG_ID>/users
```

Request

```
{
   "email":"<EMAIL_ADDRESS>"
   "first_name": "<FIRST_NAME>",
   "last_name": "<LAST_NAME>"
}
```

Request Example

```
{
   "email":"annie.conda@anaconda.com"
   "first_name": "Annie",
   "last_name": "Conda"
}
```

Response

```
{
   "first_name": "<FIRST_NAME>",
   "last_name": "<LAST_NAME>",
   "email": "<EMAIL_ADDRESS>",
   "id": "<GUID>"
}
```

Response example

```
{
   "first_name": "Annie",
   "last_name": "Conda",
   "email": "annie.conda@anaconda.com",
   "id": "1a2b3c4d-1a2b-3c4d-5e6f-1a2b3c4d5f"
}
```

Note: If you do not provide a first and last name for your user, the API call will return `null`. The user can edit this information from their profile later, if necessary.

Assign seat to user

This call assigns a seat to a given user for the organization the user is a member of.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user you want to assign a seat
POST  /organizations/<ORG_ID>/users/<USER_ID>/seats
```

There's no request or response information for this call. You will receive a 201 status code if the request is successful.

Assign token to user

This call assigns a token to a given user. Tokens are a unique security key that enable users to access the subscription seat they have been assigned.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user you want to assign a token
POST /organizations/<ORG_ID>/users/<USER_ID>/token
```

Request

```
{
   "expires_at": "<DATETIME>"
}
```

Request example

```
{
   "expires_at": "2022-07-29T00:00:00+00:00"
}
```

Response

```
{
   "token": "<TOKEN>",
   "expires_at": null
}
```

Response example

```
{
   "token": "1a2b34567c8d9101112e13f14g151617h18i19202122i23j",
   "expires_at": null
}
```

Syncing user tokens

Renewing your subscription does not extend the lifespan of your token. If you have renewed your subscription and want to retain your current token, run this call to synchronize your token and extend its lifespan to your organization's new subscription expiration date.

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user whose token needs to be synchronized
PATCH /organizations/<ORG_ID>/users/<USER_ID>/token
```

Revoking a users token

This call revokes a token from a given user ID. It should be used when a user no longer needs access to their software subscription and can be used as the first part in a user removal process.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user whose token you want to delete
DELETE /organizations/<ORG_ID>/users/<USER_ID>/token
```

Remove seat from user

This call removes a subscription seat from a given user and can be used as the second part in a user removal process.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user whose token you want to delete
DELETE /organizations/<ORG_ID>/users/<USER_ID>/seats
```

Remove user from organization

This call removes a given user from a given organization and can be used as the final part in a user removal process.

API call

```
# Replace <ORG_ID> with your organization ID, found in your Anaconda Cloud organization
↪'s URL: anaconda.cloud/organizations/<ORG_ID>/
# Replace <USER_ID> with the ID of the user whose token you want to delete
DELETE /organizations/<ORG_ID>/users/<USER_ID>
```

For more information, contact sales at sales@anaconda.com.

2.18.14 Glossary

Anaconda.org

A web-based public repository hosting service in the cloud. Anaconda.org hosts hundreds of useful Python packages for a wide variety of applications. You do not need a Anaconda.org account, or to be logged in, to search for public packages or to download and install them.

You can also publish *packages* to Anaconda.org. These packages are hosted in a *channel* connected to your Anaconda.org account and can be shared with the public. Users with paid subscriptions to Anaconda.org can designate packages as private, to be shared only with authorized users.

For more information on Anaconda.org, see *Anaconda.org*.

Anaconda Client CLI

The Anaconda Client command line interface (CLI) allows you to log in to Anaconda.org directly from your terminal window and manage your account. It is not necessary for downloading or installing packages from Anaconda.org.

Anaconda Distribution

A downloadable, open-source, high-performance, optimized Python distribution with 300+ packages automatically included. Anaconda Distribution provides the option to easily install an additional 7,500+ open-source packages for data science, including advanced and scientific analytics.

Anaconda Distribution includes *conda*, Python, *Anaconda Navigator*, and over 300 additional data science and machine learning packages. Anaconda Distribution is available for Windows, macOS, and Linux.

After installing Anaconda Distribution, you can install thousands of additional open source packages contained in the Anaconda repository with the following command:

```
# Replace <PACKAGE> with the name of the desired package
conda install <PACKAGE>
```

For more information on Anaconda Distribution, see *Anaconda Distribution*.

For information on licensing, see our Terms of Service.

Anaconda metapackage

A collection of packages at specific versions that are associated with Anaconda Distribution installers. Anaconda metapackage is used to pull all of the other packages into the installer. It contains several core, low-level libraries, including compression, encryption, linear algebra, and some GUI libraries.

The Anaconda metapackage is useful for creating environments that have all of the Anaconda Distribution packages in them and it has strong effects on conda's solver behavior.

For more information on the Anaconda metapackage, see Anaconda metapackage.

For more information about the distinctions between Anaconda Distribution and the Anaconda metapackage, see the Anaconda blog, What's in a Name? Clarifying the Anaconda Metapackage.

Anaconda Navigator

A desktop graphical user interface (GUI) included in all versions of Anaconda that allows you to easily manage *conda packages*, *environments*, *channels*, and *notebooks* without the need to use the *command line interface (CLI)*.

For more information on Anaconda Navigator, see *Anaconda Navigator*.

Anaconda Professional Repository

A private enterprise server on your network where both open source and proprietary packages may be stored and retrieved for installation on a local computer. Anaconda Professional Repository is different from *Anaconda.org* or the default conda repository. The Anaconda Professional Repository is used to govern access to data science assets, including packages and notebooks. It is available for commercial use both on-premises and in the cloud.

For more information on Anaconda's product tiers, see Anaconda pricing.

Channels

A location in a repository where conda looks for packages. Channels may point to an Anaconda.org repository or a private location on a remote or local repository that you or your organization manage. The `defaults` channel list includes, by default, the following public repository channels:

- https://repo.anaconda.com/pkgs/main
- https://repo.anaconda.com/pkgs/r
- https://repo.anaconda.com/pkgs/msys2 (for Windows computers only)

ckey

An internal ID used to identify artifacts within Anaconda Server.

Command line interface (CLI)

A program in which commands are entered as text, one line at a time, for a computer to execute. This is done in the Anaconda Prompt in Windows, and in a terminal in macOS and Linux. Conda is executed in a CLI. Contrast with *Graphical User Interface (GUI)*.

Commit

To make a set of local changes permanent by copying them to the remote server. Data Science & AI Workbench checks to see if your work will conflict with any commits that your colleagues have made on the same project, so the files will not be overwritten unless you so choose to do so.

Conda

A package and environment manager program that is packaged with *Anaconda Distribution* and run in a *CLI*. Using conda, you can install and update *conda packages* and their dependencies, and switch between *conda environments* on your local computer. Contrast with *Anaconda Navigator*.

For more information on conda, see the conda documentation.

Conda-build

A command line tool that you can use to build conda packages from recipes.

Conda environment

A folder or directory that contains a specific collection of *conda packages* and their dependencies, so they can be maintained and run independently without interfering with each other. A conda environment maintains its own files, directories, and paths, so that you can work with specific versions of libraries and/or Python itself without affecting other Python projects. Changes to one environment do not affect other environments. For example, if you upgrade a program in one environment, this will not upgrade the same program in another environment.

For example, you may use one conda environment for only Python 2.7 and Python 2.7 packages, and maintain another conda environment with only Python 3.9 and Python 3.9 packages.

The environments in *Anaconda Navigator* are conda environments.

Conda package

An archive file that contains everything that a software program needs in order to be installed and run, so you do not have to manually find and install each dependency separately. This can include system-level libraries, Python modules, executable programs, and other components. Conda tracks dependencies between specific packages and platforms, making it simple to create operating system-specific environments using different combinations of packages.

Conda packages can be managed with *conda* in the *CLI* or with *Anaconda Navigator*.

Conda recipe

Instructions used to tell conda-build how to build a package.

Conda repository

A cloud-based repository that contains 720+ open source certified packages that are easily installed locally via the `conda install` command. Can be viewed directly at https://repo.anaconda.com/pkgs/ and used within *Anaconda Navigator* when downloading and installing packages from the Environments tab, or by using *conda* commands in a *CLI*.

CVEs

Common Vulnerabilities and Exposures found in software components. Because modern software is complex with its many layers, interdependencies, data input, and libraries, vulnerabilities tend to emerge over time. Ignoring a high CVE score can result in security breaches and unstable applications.

To learn more about CVE's and how Anaconda mitigates and manages them, watch the State of Data Science webinar.

Deployment

A deployed Anaconda project containing a Notebook, web app, dashboard, or machine learning model (exposed via an API). When you deploy a project, Data Science & AI Workbench builds a container with all the required dependencies and runtime components—the libraries on which the project depends in order to run—and launches it with the security and access permissions defined by the user. This allows you to easily run and share the application with others.

Environments

A virtual environment allows multiple incompatible versions of the same (software) package to coexist on a single system. An environment is simply a file path containing a collection of mutually compatible packages. By isolating distinct versions of a given package (and their dependencies) in distinct environments, those versions are all available to work on particular projects or tasks.

Graphical user interface (GUI)

A program with graphic images, icons, and menus into which commands are entered by clicking with a mouse and/or entering text in edit boxes. *Anaconda Navigator* is a graphical user interface that overlays the conda utility.

Interactive data application

Visualizations with sliders, dropdowns, and other widgets that allow users to interact with them. Interactive data applications can drive new computations, update plots, and connect to other programmatic functionality.

Interactive development environment (IDE)

A suite of software tools that combines everything a developer needs to write and test software. It typically includes a code editor, a compiler or interpreter, and a debugger that the developer accesses through a single Graphical User Interface (GUI). An IDE may be installed locally, or it may be included as part of one or more existing and compatible applications accessed through a web browser.

Label

Part of the URLs on Anaconda.org where conda looks for packages. Labels are searched only if you specify a label.

The default label is `main`, so packages that are uploaded without specifying a label are automatically labeled `main`. The version labeled `main` is also downloaded by default, unless a user specifies a different label.

So, if a file is labeled `main`, then the label name may be omitted from the URL. For example, the following repositories are equivalent:

```
https://anaconda.org/sean/labels/main
https://anaconda.org/sean
```

Commands such as `conda install` can be used with a channel or used with a channel and a label:

```
conda install --channel sean selenium
conda install --channel sean/label/dev selenium
conda install --channel sean/label/stable selenium
```

Miniconda

Miniconda is a lightweight version of *Anaconda Distribution* run from a *CLI* that only includes *conda*, Python, and their dependencies. Once Miniconda is installed, you can install additional conda packages directly from the CLI with the following command:

```
# Replace  <PACKAGE> with the name of the package you want to install in your environment
conda install <PACKAGE>
```

For more information on Miniconda, see *Miniconda*.

For information on licensing, see our Terms of Service.

Mirror

Mirroring is the process of accurately copying data from a source and then storing it in a new location. A mirror can be either a subset of the original or an exact 1 to 1. Mirroring can be in real-time, on a fixed schedule, or a one-time event.

Namespace

Each user and organization has their own location called a "namespace" where they may host packages. You can view the public packages in a user or organization's namespace by navigating to their user page.

EXAMPLE: The `travis` user namespace located at `https://anaconda.org/travis` contains packages that were uploaded and shared by the user whose account is named `travis`.

Noarch package

A conda package that contains nothing specific to any system architecture, so it may be installed on any system. When conda searches for packages on any system in a channel, conda always checks both the system-specific subdirectory—for example, `linux-64`—and the `noarch` directory.

For a list of noarch packages available in Anaconda's `main` channel, see https://repo.anaconda.com/pkgs/main/noarch/.

Notebooks

Anaconda Notebooks is a hosted JupyterLab service, powered by PythonAnywhere, that enables you to run JupyterLab notebooks reliably online. The Notebooks service provides you with a hosted JupyterLab instance running in a dedicated JupyterHub environment, persistent cloud storage, pre-configured conda environments with common data science packages, and the ability to create your own custom environments.

For more information on Anaconda Notebooks, see *Anaconda Notebooks*.

Package

Software files and information about the software, such as its name, the specific version, and a description, that are bundled into a file that can be installed and managed by a package manager. While packages are generally used for files, they can also be used for metadata alone. When it is, it is called a metapackage.

Package manager

A collection of software tools that automates the process of installing, upgdating, configuring, and removing packages. Also known as a package management system.

Anaconda Navigator includes the conda package manager with a *GUI* overlay for ease of use.

Anaconda.org supports two package managers: *conda* and pip.

Parameters

Model parameters are the weights and biases it learns during training. The more parameters a model has, the better its ability to learn, but the more tightly it will conform to its training data.

Project template

Contains all the base files and components to support a particular programming environment. For example, a Python Spark project template contains everything you need to write Python code that connects to Spark clusters. When creating a new project, you can select a template that contains a set of packages and their dependencies.

Quantization Method

Quantization balances a model's parameters. This is done to make the model either more efficient in terms of memory usage, or more robust and accurate. Think of this like taking a 300-page manual and condensing it down to 100, 50, or 30 pages of the most important information.

R package

A *conda package* that installs and runs the R computer language. Examples include R Essentials, a bundle of 210 popular open-source software programs written in the R computer language.

For more information on R packages, see *Using R language with Anaconda*.

Repository

Any storage location from which software or software assets, like packages, may be retrieved and installed on a local computer. See also: *Anaconda Professional Repository* and *conda repository*.

REST API

A common way to operationalize a machine learning model is through a REST API. A REST API is a web server endpoint, or callable URL, which provides results based on a query. REST APIs allow developers to create applications that incorporate machine learning and prediction, without having to write models themselves.

Session

An open project, running in an editor or IDE.

Token

An access control token is a random alphanumeric string that is inserted into a package or channel URL. Tokens can be used with Anaconda.org, the Anaconda Professional Repository, or the AE4 Repository. The token allows you to download a package or add a channel that are restricted. Only those users with the correct access token can access the private file. You can use Anaconda Client in your CLI or your organization in Anaconda.org to generate tokens for various private package and channel purposes.

2.18.15 Help and support

The following resources are available to help you.

Anaconda community forum Community support for Anaconda's products

https://community.anaconda.cloud/ Anaconda Learning Training videos on Python, conda, and data science

https://learning.anaconda.cloud/?utm_campaign=learning&utm_medium=documentation&utm_source=anacondadocs&utm_content=h
Conda community forum The conda organization's Discourse forum for conda discussion and news

https://conda.discourse.group/

Note: You may be able to receive help with installing a package or building and publishing an updated package version in the conda Discourse forums or Zulip chat. Other libraries or packages will similarly also have issue trackers, discussion forums, or chat rooms that you can use for help.

Package creators may also contact Anaconda to submit their package for consideration to be included in Anaconda.

Support tickets

If you're in need of further technical assistance, please file a support ticket.

Our Business and Enterprise tiers include access to Tier 1 and Tier 2 support hours.

- Tier 1 Services include setup and troubleshooting assistance, assistance with core product features, and interoperability support, among others.
- Tier 2 Services include support for more complex issues, custom conda package builds, custom installer builds, and environment management issues.

Contact your sales associate if you need support hours.

Professional Services

If you need even more help than our Tier 1 or Tier 2 support hours are able to provide, Anaconda recommends contacting its Professional Services team.

*To find out if Anaconda is right for you, please contact Sales at sales@anaconda.com for product demos.**

2.18.16 Troubleshooting

If you encounter an issue that is not listed here, you can obtain support for Anaconda through the Anaconda community. For Anaconda installation or technical support options, visit our support offerings page.

Note: The Navigator and Anaconda.org troubleshooting pages have been consolidated into this page. Click to view their sections:

- *Navigator*
- *Anaconda.org*

Tip: You can search this page for information using your browser's search function: Ctrl+F (Windows)/Cmd+F (Mac).

Most common issues

Conda: Channel is unavailable/missing or package itself is missing

Cause

After you have configured your `.condarc` on either the Pro (legacy) or Business tier, in some cases you may be unable to install packages. You may receive an error message that the channel or package is unavailable or missing.

Solution

One potential fix for all of these is to run the following command:

```
conda clean --index-cache
```

This will clear the "index cache" and force conda to sync metadata from the repo server.

Receiving a 403 error from an Anaconda channel

Tip: If you are working with the Anaconda-hosted `conda-forge` and are receiving a 403 error, see *Receiving a 403 error from hosted conda-forge* instead.

Cause

A 403 error is a generic HTTP error issued by a web server in the event the client is forbidden from accessing a resource. In other words, if you are receiving a 403 error, conda thinks that either the channel doesn't exist or you do not have permission to use it.

The 403 error you are receiving might look like this:

```
Collecting package metadata (current_repodata.json): failed

UnavailableInvalidChannel: HTTP 403 FORBIDDEN for channel main <https://repo.anaconda.
↪com/repo/main>

The channel is not accessible or is invalid.

You will need to adjust your conda configuration to proceed.
Use `conda config --show channels` to view your configuration's current state,
and use `conda config --show-sources` to view config file locations.
```

There are a few possible reasons for receiving this error:

- You have misconfigured the channels in your `.condarc` file.
- A firewall or other security device or system is preventing user access.
- Access is blocked due to a potential terms of service violation.

Solution

First, double-check your channel configurations and verify that the address has been entered correctly.

If that fails, speak with your IT administrator to ensure your proxy or firewall is not blocking traffic to the repository channels.

If you are sure traffic is not being blocked and your issue persists, open a support ticket.

HTTP 000 CONNECTION FAILED

Cause

This is generally caused by a proxy misconfiguration, which can be corrected by setting your proxy servers correctly. However, because some businesses do not have an easy method of providing their SSL cert, Anaconda recommends bypassing the SSL verification step if you encounter this error.

Solution

If you receive this error message, first run the following command:

```
conda config --set ssl_verify false
```

(Package Security Manager users) If necessary, install `conda-token` by running the following command:

```
conda install conda-token --channel https://repo.anaconda.cloud/repo/anaconda-tools --
↪name base
```

(Package Security Manager users) Ensure the token verification step ignores SSL errors by running the following command:

```
# Replace <TOKEN> with your token
conda token set --no-ssl-verify <TOKEN>
```

You may see the following warning, though you can safely ignore it:

```
/Users/<USERNAME>/Applications/miniconda3/lib/python3.7/site-packages/urllib3/
↪connectionpool.py:1020: InsecureRequestWarning: Unverified HTTPS request is being made␣
↪to host 'repo.anaconda.cloud'. Adding certificate verification is strongly advised.␣
↪See: https://urllib3.readthedocs.io/en/latest/advanced-usage.html#ssl-warnings
InsecureRequestWarning,
```

Conda: command not found on macOS/Linux

Cause

The conda shell function is not available or is not working properly. Some causes may include:

- You didn't restart your shell after installing Anaconda or Miniconda.
- You didn't allow the installer to modify your startup script.
- Conda has been corrupted, usually by a change in the Python package (e.g. 3.9->3.7).
- You have set `auto_activate_base` to `false`.

Solutions

If your install is new, close and reopen your terminal application. If you want your terminal to remain open, you can source your `~/.zshrc` file (in macOS) or `~/.bashrc` file (in Linux). When you "source" a script, your terminal re-reads it and applies the changes, which usually only happens when the terminal is first opened.

macOS

```
source ~/.zshrc
```

Linux

```
source ~/.bashrc
```

—

To initialize conda in your current terminal, run the following command, depending on your operating system:

macOS

```
# Replace <PATH-TO-CONDA> with the file path to your conda installation
<PATH-TO-CONDA>/bin/conda init zsh
```

For example, if you installed Anaconda Distribution to the default location with the `.sh` installer (`~/anaconda3/`), your command would look like the following:

```
~/anaconda3/bin/conda init zsh
```

Linux

```
# Replace <PATH-TO-CONDA> with the file path to your conda installation
<PATH-TO-CONDA>/bin/conda init bash
```

For example, if you installed Anaconda Distribution to the default location, your command would look like the following:

```
~/anaconda3/bin/conda init bash
```

—

To see the value for `auto_activate_base`, run the following command:

```
conda config --describe auto_activate_base
```

If your terminal returns `true`, this means that conda is not automatically activating your base environment when you start a new shell. This behavior emulates your system Python, and some users prefer to have their conda environment be inactive until they need it. However, this is not conda's default behavior after installation.

To change the value of `auto_activate_base`, run the following command:

```
# Replace <TRUE_OR_FALSE> with true or false
conda config --set auto_activate_base <TRUE_OR_FALSE>
```

If you have `auto_activate_base` set as `false`, the conda command will still be available as a shell function, but your base environment will not be active when a new shell is started. To activate your base environment, run `conda activate`.

`conda update anaconda` command does not install the latest version of the `anaconda` metapackage

---

Note: The `anaconda` metapackage was removed from Anaconda Distribution installers in February of 2023 and no longer appears in your `base` environment by default. This troubleshooting topic assumes you are working with package incompatibilities in an environment containing the `anaconda` metapackage.

Cause

If you have installed packages that are incompatible with the latest version of the Anaconda metapackage, running `conda update anaconda` updates the Anaconda metapackage to the latest compatible version. Keep in mind this might not be the latest version.

Solution

1. Obtain a list of the conflicting packages by running `conda update anaconda` or `conda install anaconda=2023.07`.

   Note: Replace `2023.07` with the latest version number.

   ---

2. Enter `n` to cancel the installation or update.
3. Once you know which packages are conflicting, you can:
   - update all current packages without upgrading to the latest version of the `anaconda` metapackage, or
   - remove the conflicting packages and then upgrade to the latest version of the `anaconda` metapackage.

—

To update all current packages without upgrading to the latest version of the `anaconda` metapackage:

1. Remove the `anaconda` metapackage itself by running the following command:

   ```
   conda remove anaconda
   ```

2. Update all currently installed packages by running the following command:

   ```
   conda update --all
   ```

—

To remove the conflicting packages and upgrade to the latest version of the `anaconda` metapackage:

1. Remove the conflicting packages by running the following command for each one:

```
conda remove <PACKAGE>
```

2. Update to the latest version of the anaconda metapackage:

```
conda update anaconda
```

Recovering your Anaconda installation

If your Anaconda installation has become corrupted and is in a state where normal conda commands are not functioning, use the following steps to repair Anaconda and preserve your installed packages and environments.

Solution

1. Download a new installer, then follow the instructions for your operating system.

Note: Use the actual path, filename, and directory name for your installation.

Windows

1. Open a terminal application, such as Command Prompt.
2. Change your original installer's name so you do not overwrite it:

```
move anaconda3 anaconda_old
```

3. Run the Anaconda.exe installer as usual and use robocopy to sync the directories:

```
robocopy anaconda_old anaconda3 /S
```

4. Delete your old Anaconda installation directory:

```
rd /s anaconda_old
```

macOS

1. Open a terminal application.
2. Change your original installer's name so you do not overwrite it:

```
mv anaconda3 anaconda_old
```

3. Install to same directory as your original installer:

```
# Replace <INSTALLER> the name of your installer file
bash ~/Downloads/<INSTALLER>
rsync -a anaconda_old/ anaconda3/
```

4. Delete your old Anaconda installation directory:

```
rm -rf anaconda_old
```

Linux

1. Open a terminal application.
2. Change your original installer's name so you do not overwrite it:

   ```
   mv anaconda3 anaconda_old
   ```

3. Install to same directory as your original installer:

   ```
   # Replace <INSTALLER> the name of your installer file
   bash ~/Downloads/<INSTALLER>
   rsync -a anaconda_old/ anaconda3/
   ```

4. Delete your old Anaconda installation directory:

   ```
   rm -rf anaconda_old
   ```

2. Run `conda list` to view the packages from the previous installation.
3. Run `conda info -e` to list the environments created in the previous installation, which are now available in the new installation.

Anaconda Distribution issues

Using Anaconda behind a firewall or proxy

Corporate security policies may prevent a new Anaconda installation from downloading packages and other functionality that requires connecting to an external server. To make external connections, you may need to connect to a firewall/proxy. Additionally, your IT team may need to allow connections to https://anaconda.org and https://repo.anaconda.com, as these are the main package repositories.

Solution

To add the proxy information, you will need to add two entries to your `.condarc` file, located in the user's home directory. This information should be made available by your IT team and may contain a username and password that is included in the URL. For more information, see configure conda for use behind a proxy server.

Example `.condarc` file configuration:

```
channels:
  - defaults

proxy_servers:
  http: http://username:password@proxyurl.com:8080
  https: https://username:password@proxyurl.com:8443
```

In some situations, it may be necessary to export the `HTTP_PROXY` and `HTTPS_PROXY` environment variables.

Windows

```
set HTTP_PROXY=http://username:password@proxyurl.com:8080
set HTTPS_PROXY=https://username:password@proxyurl.com:8443
```

macOS/Linux

```
export HTTP_PROXY=http://username:password@proxyurl.com:8080
export HTTPS_PROXY=https://username:password@proxyurl.com:8443
```

If these steps have not allowed connections, you should speak to your IT team to verify that security policies are not blocking connections to https://anaconda.com or https://repo.continuum.io.

InsecurePlatformWarning error

Cause

`InsecurePlatformWarning` appears only when the installed version of Python is older than version 2.7.9. This message warns only that the validity of the SSL connection is not being verified. It should not affect your package downloads.

Solution

To resolve this, install the updated package `ndg-httpsclient`:

```
conda install ndg-httpsclient
```

Note: When initially installing this package, you receive the SSL warning again. Once it is installed, the package will prevent the warnings.

Anaconda search error: not recognized as an internal or external command/unrecognized arguments

Cause

If `anaconda-client` is not installed and you search for a package on anaconda.org using the Anaconda search command…

```
# Replace <PACKAGE> with the name of a package you want to search for
anaconda search --package-type conda <PACKAGE>
```

…You will receive the following error message:

Windows

```
'anaconda' is not recognized as an internal or external command,
operable program or batch file.
```

macOS/Linux

```
usage: conda [-h] [-V] command ...
conda: error: unrecognized arguments: -t <PACKAGE>
```

Solution

To resolve the error:

1. Install `anaconda-client` by running the following command:

   ```
   conda install anaconda-client
   ```

2. Search for a package:

   ```
   # Replace <PACKAGE> with the name of the package you are looking for
   anaconda search --package-type conda <PACKAGE>
   ```

Collecting package metadata (repodata.json): - Killed

Cause

When installing or searching for a package, you may see the process end abruptly with a "Killed" message:

```
$ conda install numpy
Collecting package metadata (current_repodata.json): done
Solving environment: failed with initial frozen solve. Retrying with flexible␣
↪solve.
Collecting package metadata (repodata.json): - Killed
```

This may be because your system lacks the sufficient disk space or memory to complete the process.

Solution

Verify that you have enough disk space and memory on your system to install and use Anaconda packages. The minimum system requirements for Miniconda and Anaconda installers can be found in the `conda` user guide.

Linking problems when Python extensions are compiled with gcc

Cause

When compiling Python extensions with gcc on Windows, linking problems may result.

Solution

To resolve these linking problems, use the conda package `libpython`, a mingw import library that Anaconda builds and includes with the Anaconda Distribution.

Error message: Unable to remove files

When trying to update or install packages with conda, you may see an error message such as:

```
Error: Unable to remove files for package: <PACKAGE>
Please close all processes running code from conda and try again.
```

Cause

Generally, this is caused by a file lock issue.

Solution

Before updating or installing any packages with conda, be sure to terminate any running Anaconda processes, such as Navigator, Spyder, or IPython.

You can also force the installation of the package:

```
# Replace <PACKAGE> with the name of the package you want to install
conda install --force-reinstall <PACKAGE>
```

Using 32- and 64-bit libraries and CONDA_FORCE_32BIT

To work with both 32- and 64-bit libraries, Anaconda recommends that you have two separate installs: Anaconda32 and Anaconda64 or Miniconda32 and Miniconda64.

Solution

When working with both versions, add the path to your installer files to the PATH.

To get the information about conda, including your PATH, run the following command:

```
conda info -a
```

Caution:

- Always specify which version you want to work with because mixing 32- and 64-bit packages can cause problems in your environment.
- Using `force_32bit` is not recommended because it forces 32-bit packages to be installed in the environment, but does not force 32-bit libraries to load at runtime.
- `force_32bit` should be used only when running `conda-build` to build 32-bit packages on a 64-bit system.

Anaconda Distribution installation issues

Cannot get conda to run after installing

In macOS or Linux, you may get "conda not found" or "conda is not recognized as an internal or external command" or a similar message, and you cannot execute conda in a terminal window regardless of what path you are on. This will not happen in Windows if you use the Anaconda Prompt terminal dialog.

Cause

When you were installing Anaconda or Miniconda, you most likely answered "No" to the question about prepending the conda prompt to your PATH.

Solution one

Uninstall and then reinstall Anaconda or Miniconda, answering "Yes" to the question about prepending the conda prompt.

Solution two

macOS

Manually edit your `.bash_profile` file to prepend the Anaconda or Miniconda install location.

1. Open your `.bash_profile` file in a text editor with the following command:

```
open ~/.bash_profile
```

2. Add this line to the `.bash_profile` file and save:

```
# Replace <USERNAME> with your username
export PATH=/Users/<USERNAME>/anaconda3/bin:$PATH
```

3. Close and re-open your terminal window before running a conda command again.

Linux

Manually edit your `.bashrc` file to prepend the Anaconda or Miniconda install location.

1. Open your `.bashrc` file in a text editor with the following command:

```
open ~/.bashrc
```

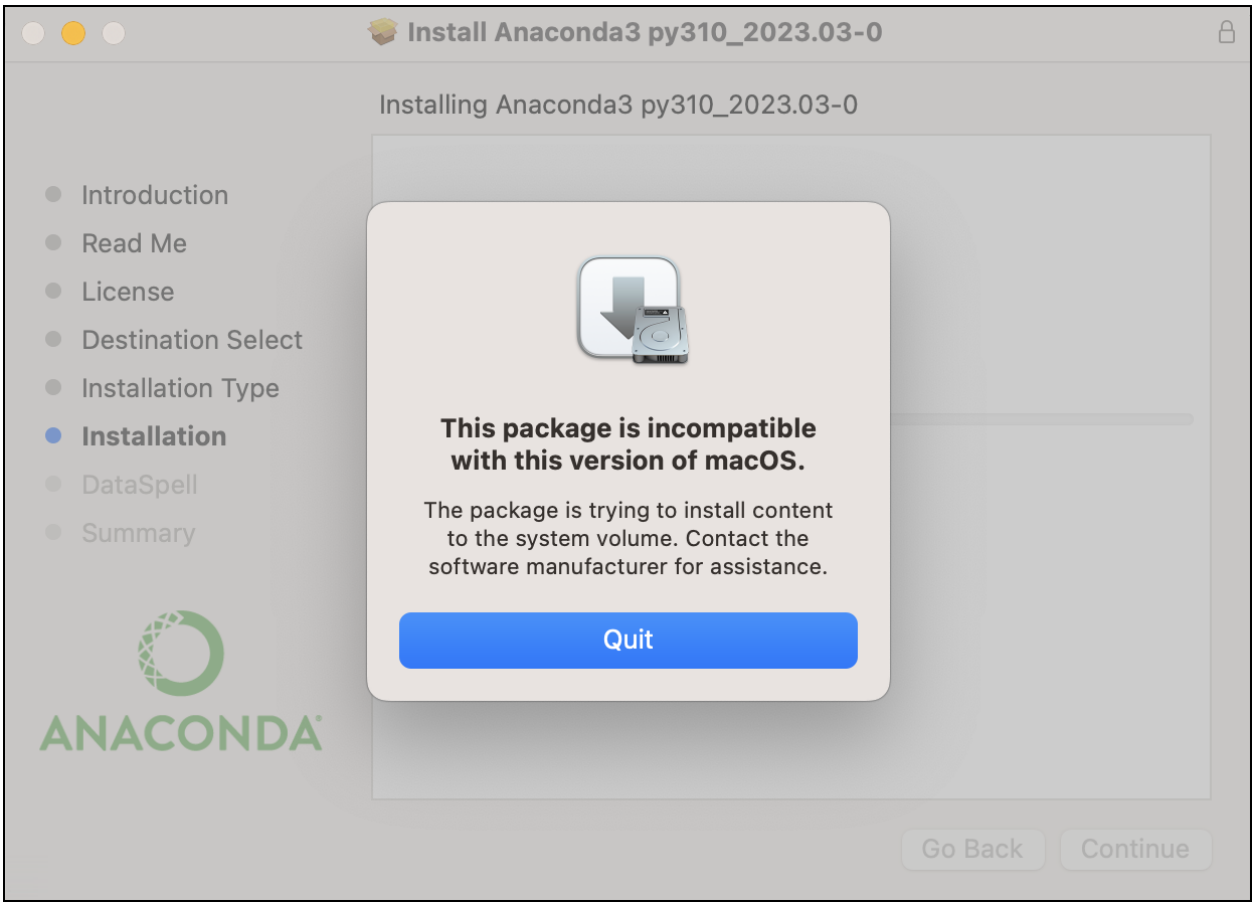
2. Add this line to the `.bashrc` file and save:

```
# Replace <USERNAME> with your username
export PATH=/Users/<USERNAME>/anaconda3/bin:$PATH
```

3. Close and re-open your terminal window before running a conda command again.

"This package is incompatible with this version of macOS" error when running a .pkg installer on OSX

When running the `.pkg` installer, you may encounter this error during the "Installation" step:



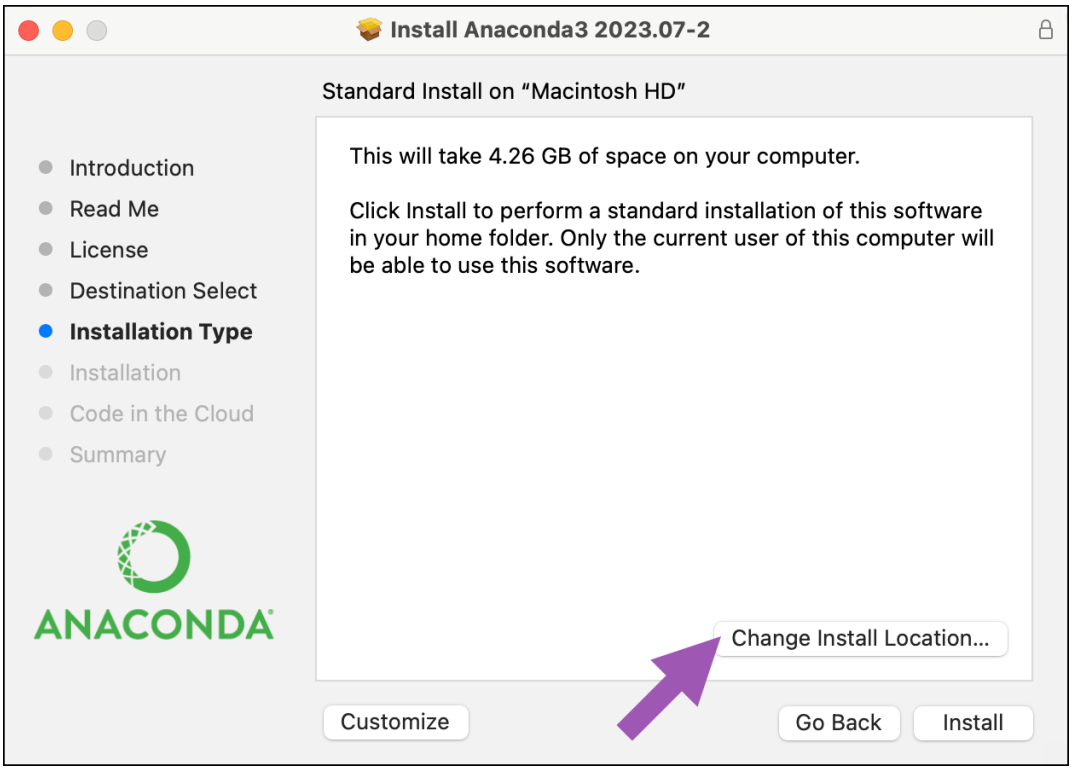
Cause

This error occurs when the installation attempts to write to a directory for which it does not have write permissions.

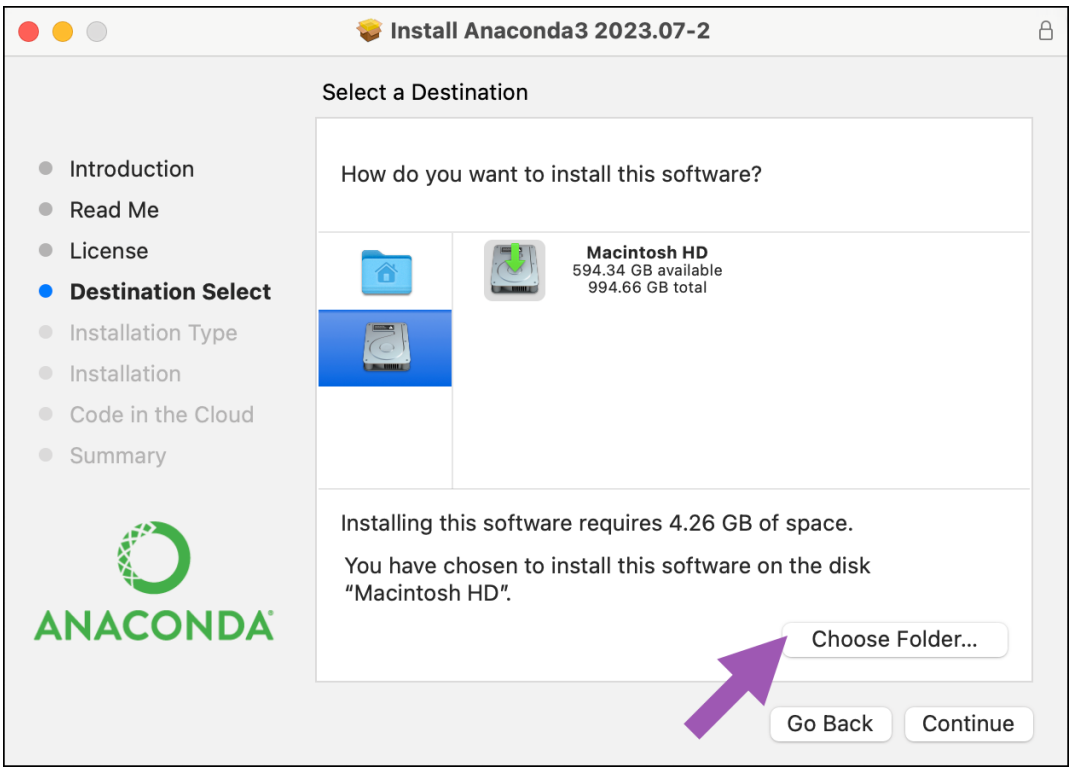
Solution

Manually select an appropriate install location. The following example shows how to select your user's home directory.

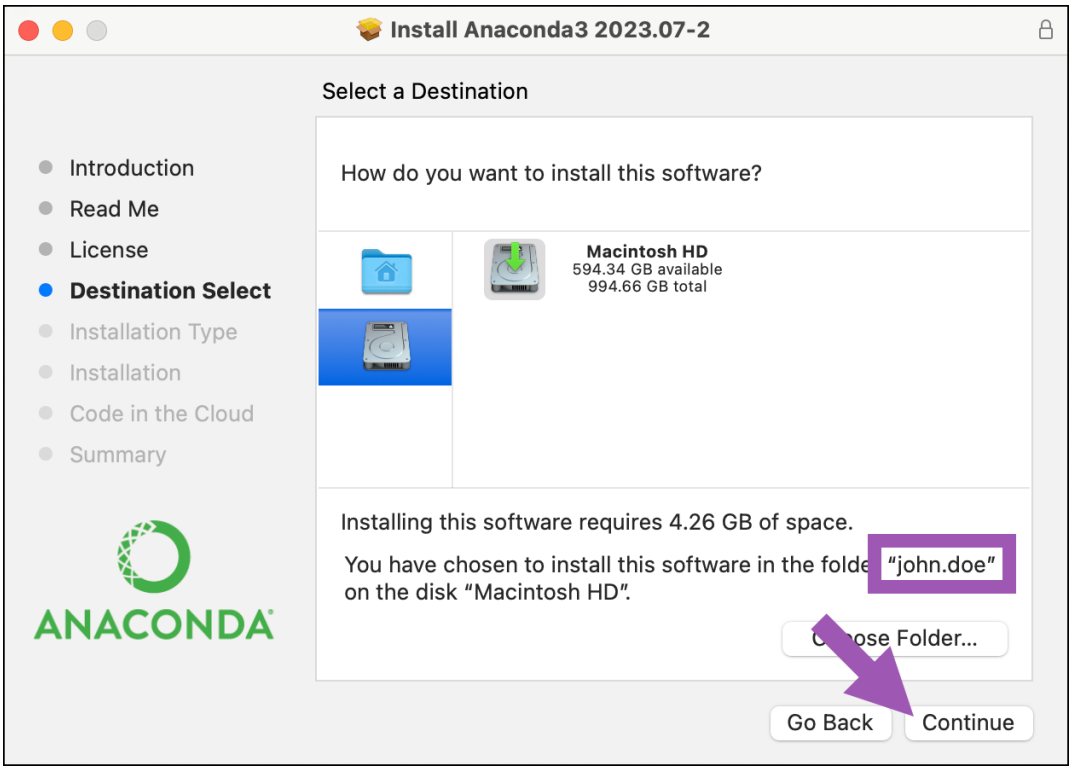
1. Re-run the installer and click through until you reach either the Installation Type or Destination Select page.
2. If you reach the Installation Type page first, click **Change Install Location…**. This will take you to the Destination Select page.



3. Click **Install on a specific disk…**.
4. Select the appropriate destination drive. Then click **Choose Folder…**.



5. Select your user's home directory (e.g. /Users/john.doe/). Then click **Choose**.
6. In the message box, confirm the name of the install folder you chose in the previous step. Then click **Continue**.



7. Click **Install**, and then proceed with the rest of the installation.

If you continue to receive the same error message, please open an issue here, and be sure to include the installation log output from your `install.log` file, which can be found at `/var/log/install.log`.

Anaconda installer download problems

Cause

The Anaconda installer files are large (over 600 MB), and some users have problems with errors and interrupted downloads when downloading large files.

Solution one

1. Download and install the smaller *Miniconda* (between 70 and 100 MB).
2. Download and install the remaining packages in Anaconda by using the following command:

```
conda install anaconda
```

Note: If the package downloads are interrupted, just run `conda install anaconda` again. Conda only downloads the packages that were not finished in any previous attempts.

Solution two

Download the large Anaconda installer file, and restart it if the download is interrupted or you need to pause it.

Windows

Chrome

1. Find the latest installer at anaconda.com, or an older installer at repo.anaconda.com/archive.
2. In Chrome, use Ctrl+J to open the Chrome download manager.
3. Click **Resume** to continue the interrupted download.

The Chrome download manager also enables you to pause and resume or cancel and retry downloads in progress.

Edge

1. Find the latest installer at anaconda.com, or an older installer at repo.anaconda.com/archive.
2. In Edge, click **Settings and more**.
3. Click **Downloads** to open the Downloads dialog.
4. From here, you can use the play, pause, and cancel buttons to control downloads in progress.

Tip: Go to edge://downloads/all to open the full page of recent downloads. From here, you can retry cancelled downloads.

Internet Explorer

1. Find the latest installer at anaconda.com, or an older installer at repo.anaconda.com/archive.
2. Click **Tools**.
3. Click **View Downloads** to open the Download Manager.
4. Click **Resume** beside the stopped download to restart downloading. The download resumes at the point where it stopped.

macOS and Linux

1. Open a terminal window.
2. To download the file, use the following command:

```
# Replace <INSTALLER> with the the installer file you want to install
# See all available installers on https:://repo.anaconda.com/archive/
curl -O https://repo.anaconda.com/archive/<INSTALLER>
```

3. To pause the download, use Ctrl+C.

> **Note:** While a download is paused, you can shut down or restart your computer.

4. When you are ready to resume your download, use the following command:

```
#Replace <INSTALLER> with the same file you used above
curl -O -C https://repo.anaconda.com/archive/<INSTALLER>
```

> **Note:** The `-C` flag is the option for "continue". You can pause and restart a download as many times as you wish.

Error message on Miniconda install: Already installed

Cause

This situation can occur if you are getting a conda error and you want to reinstall Miniconda to fix it.

Solution

For macOS and Linux, download and install the appropriate Miniconda for your operating system from the *Miniconda download page* using the `--force` or `-f` option by running the following command:

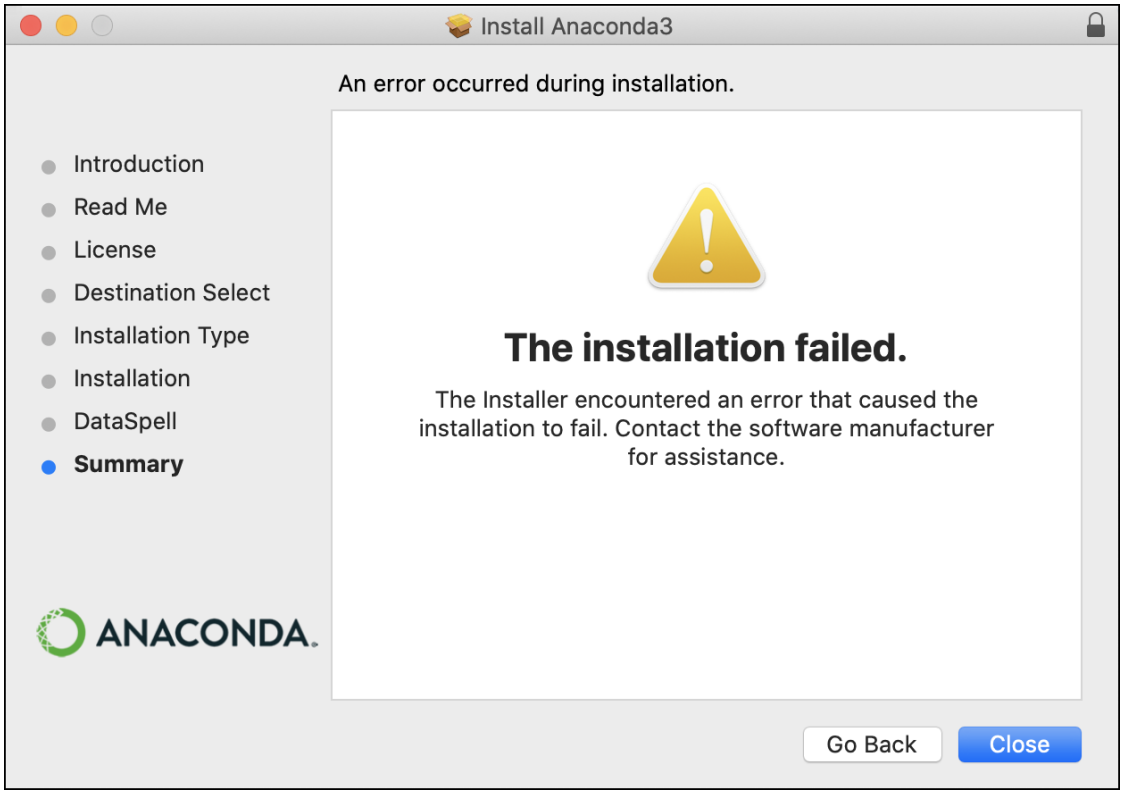
```
# Replace the name of the installer if you need a different version or operating system
bash ~/Downloads/Miniconda3-latest-MacOSX-x86_64.sh -f
```

> **Caution:** Make sure to install to the same location as your existing install so it overwrites the core conda files and does not install duplicates in a new folder.

"The installation failed" message when running a .pkg installer on OSX

Cause

When running the `.pkg` installer, you may see this message at the end of the installation:



If so, check for the following:

1. Open your `/var/log/install.log` file and check whether the most recent lines show errors following a call to `conda init --all`.

```
open /var/log/install.log
```

2. In your `$HOME` directory, check whether the owner of your shell config files is `root`:

```
ls -la ~/.bash_profile ~/.config/fish/config.fish ~/.tcshrc ~/.xonshrc ~/.
↪zshrc
```

```
-rw-r--r--  1 root  staff  491 May  9 17:37 /Users/jdoe/.bash_profile
-rw-r--r--  1 root  staff  195 May  9 17:37 /Users/jdoe/.config/fish/config.fish
-rw-r--r--  1 root  staff  314 May  9 17:37 /Users/jdoe/.tcshrc
-rw-r--r--  1 root  staff  597 May  9 17:37 /Users/jdoe/.xonshrc
-rw-r--r--  1 root  staff  490 May  9 17:37 /Users/jdoe/.zshrc
```

Solution

If **both** of the above are true, do the following:

1. Change the owner of your shell config files to your current user:

```
sudo chown -R $USER ~/.bash_profile ~/.config/fish/config.fish ~/.tcshrc ~/.
↪xonshrc ~/.zshrc
```

```
-rw-r--r--  1 jdoe  staff  491 May  9 17:37 /Users/jdoe/.bash_profile
-rw-r--r--  1 jdoe  staff  195 May  9 17:37 /Users/jdoe/.config/fish/config.fish
-rw-r--r--  1 jdoe  staff  314 May  9 17:37 /Users/jdoe/.tcshrc
-rw-r--r--  1 jdoe  staff  597 May  9 17:37 /Users/jdoe/.xonshrc
-rw-r--r--  1 jdoe  staff  490 May  9 17:37 /Users/jdoe/.zshrc
```

2. *Uninstall* the previous installation. Then re-run the installer, making sure to select the **Install for me only** option.

Windows-specific Anaconda Distribution issues

Cannot see Anaconda menu shortcuts after installation on Windows

After installing on Windows, the Anaconda Prompt and Anaconda Navigator shortcuts do not appear in the Windows Start menu.

Cause

This may be caused by the way Windows updates the Start menu, or by having multiple versions of Python installed that are interfering with one another. Existing Python installations, installations of Python modules in global locations, or libraries that have the same names as Anaconda libraries can all prevent Anaconda from working properly.

Solution

If Start menu shortcuts are missing, Microsoft recommends rebooting your computer or restarting Windows Explorer.

If that doesn't work, clear your `$PYTHONPATH` environment variable, if applicable, and re-install Anaconda.

Other potential solutions are covered in the "Conflicts with system state" section of the following blog post.

Windows error: Failed to create Anaconda menus or Failed to add Anaconda to the system PATH

During installation on a Windows system, a dialog box appears that says "Failed to create Anaconda menus, Abort Retry Ignore" or "Failed to add Anaconda to the system PATH." There are many possible Windows causes for this.

Solution

Try these solutions, in order:

- Do not install on a PATH longer than 1024 characters.
- Turn off anti-virus programs before installing, then turn the anti-virus programs back on.
- Uninstall all previous Python installations.
- Clear all PATHs related to Python in sysdm.cpl file.
- Delete any previously set up Java PATHs.
- If JDK is installed, uninstall it.

Note: To find your path variable:

1. Search for "environment variables" in the search in your taskbar.
2. Select **Edit the System Environment Variables** in the sidebar.
3. Click **Environment Variables** in the System Properties dialog.
4. Highlight the **path** variable for your user.
5. Click **Edit**.

Anaconda interfering with other software on Windows

Cause

If a user chooses to add Anaconda to the Windows PATH, this can cause programs to use the new Anaconda versions of software (like Python) and not the versions that were already in place. In some cases, this can cause incompatibility and errors.

Solution

Anaconda recommends against adding Anaconda to the Windows PATH manually. Instead, use Anaconda software by opening Anaconda Navigator or Anaconda Prompt from the Start Menu.

Files left behind after uninstalling Anaconda on Windows

Cause

Some users may need to keep settings files and other users may need to delete them, so Anaconda leaves some settings files in place when it is uninstalled. Specifically, the directories `.spyder2`, `.ipython`, `.matplotlib`, and `.astropy` remain. Depending on your version of Windows, these may be in `C:\Documents and Settings\<USERNAME>` or in `C:\Users\<USERNAME>`.

Note: Replace `<USERNAME>` with your Windows username as it appears in the `Documents and Settings` or `Users` folder.

Solution

Manually delete any unneeded settings files.

Spyder errors or failure to launch on Windows

Cause

This may be caused by errors in the Spyder setting and configuration files.

Solution

1. Close and relaunch Spyder and see if the problem remains.
2. Open the Start Menu and then click **Reset Spyder Settings** and see if the problem remains.
3. Close Spyder and relaunch it from Anaconda Prompt with the following command:

   ```
   spyder
   ```

4. Delete the directory `.spyder2` and then repeat the first item in this list. Depending on your version of Windows, `.spyder2` may be in `C:\Documents and Settings\<USERNAME>` or in `C:\Users\<USERNAME>`.

Note: Replace `<USERNAME>` with your Windows username as it appears in the `Documents and Settings` or `Users` folder.

Uninstaller requests admin privileges on Windows

After installing Anaconda or Miniconda as a non-administrative user on Windows, uninstalling may prompt for administrative privileges.

Cause

This occurs when running the uninstaller by choosing Control Panel > Uninstall a program, selecting Anaconda or Miniconda from the list of programs, and clicking **Uninstall**.

Solution

Open the `anaconda3` or `miniconda3` installation folders and run the `.exe` file uninstaller from that location. Uninstallation will complete without prompting for administrative privileges.

EXAMPLE: If you installed Miniconda3, the uninstall file will be `Uninstall-Miniconda3.exe`. Users who installed Miniconda2 or Anaconda will find a similar file with the appropriate name.

Windows permission errors when installing from Favorites folder

Cause

The Windows Favorites folder has unusual permissions and may cause permission errors with installers of any software. If you try launching the installer from the Favorites folder, you may see errors such as "Setup was unable to create the directory", "Access is denied", or "Error opening file for writing".

Solution

Move the installer to a different folder and run the installer from the new folder.

Trouble with activation on PowerShell on Windows

Some users might run into the following backtrace on Windows:

```
File "C:\Users\damia\Miniconda3\lib\site-packages\conda\activate.py", line 550, in _
↪replace_prefix_in_path
assert last_idx is not None
AssertionError
```

Solution

1. Open a Command Prompt window.
2. Navigate to where you installed conda. The following command shows the default:

   ```
   cd C:\Users\<USERNAME>
   ```

3. Run the following command:

   ```
   python -m conda init
   ```

4. Close the Command Prompt window.

Note: If the above method didn't work, try running:

```
conda update conda
```

---

macOS-specific Anaconda Distribution issues

"Conda: command not found" in zsh shell

Cause

If you did not initialize conda when you installed it on your macOS computer, or if you uninstalled and reinstalled zsh (or deleted your `.zshrc` file), your zsh shell will be unable to use conda commands properly.

Solution

To initialize conda for zsh:

1. Open a terminal application and run the following command:

```
# Replace <PATH-TO-CONDA> with the file path to your conda installation
<PATH-TO-CONDA>/bin/conda init zsh
```

   For example, if you installed Miniconda to the default location with the `.sh` installer (`~/miniconda3/`), the command would be:

```
~/miniconda3/bin/conda init zsh
```

2. Close and reopen your terminal application.

Segmentation fault on package import with macOS Python 3.7 interpreter

In CPython < 3.8, using `python3-config` to determine a linking command line to compile an extension module will cause that extension module to segfault upon import. `python3-config` does provide command-line flags, but for the different purpose of embedding a Python interpreter.

Cause

This is because of the command-line flags returned by `python3-config`. Before Python 3.8, those are needed to embed the core Python interpreter into a different project altogether and not those that should be used when linking a Python extension module.

Python modules should never link to the core Python interpreter library directly, either statically at build time or dynamically at runtime. This is because the Python executable itself provides all the necessary functions and symbols.

Solution

You should only use `python*-config -ldflags` when linking to an interpreter library (either static or shared).

Action	Python < 3.8	Python >= 3.8
Get command line to link to extension module	`python -c "import sysconfig; print(sysconfig.get_config_var('LDSHARED'))"`	`python3-config --ldflags`
Get command line to embed Python interpreter	`python3-config --ldflags`	`python3-config --ldflags --embed`

`python3-config` doesn't include the command/compiler name, whereas the sysconfig way does. This works provided none of your arguments have spaces:

```
python -c "import sysconfig; print(' '.join(sysconfig.get_config_var('LDSHARED
↪').split(' ')[1:]))"
```

Linux-specific Anaconda Distribution issues

Missing libgomp on Power8

If the Python command `import numpy` fails, the system is likely missing the `libgomp` system library.

Cause

Most Power8 Linux distributions include `libgomp`, but some may not.

Solution

Check whether the system is missing `libgomp` by running the following command:

```
conda inspect linkages --name root numpy
```

If `libgomp.so.1` is listed in the `not found:` section, it must be installed.

Install `libgomp` on Ubuntu by running the following command:

```
apt install libgomp1
```

Install `libgomp` on Red Hat Enterprise Linux (RHEL) or CentOS by running the following command:

```
yum install libgomp
```

Anaconda on Power8 reports "can not execute binary file"

Cause

Anaconda on Power8 only supports little endian mode. The little endian Python binary will not execute on a big endian operating system.

Solution

Install Anaconda on Power8 on a little endian Linux installation or VM.

Anaconda Distribution installation failed with "'ascii' codec can't encode character 'xe4' in position 96" error

Cause

The package `conda-package-streaming` requires certain encoding variables that fresh installations of Linux may not have properly set, causing an ASCII error and a failed installation of Anaconda Distribution.

Solution

1. Add the following to your current shell config file (`.bashrc`, `.zshrc`, etc.):

```
export LANGUAGE="en_US.utf8"
export LC_ALL="en_US.utf8"
export LC_CTYPE="en_US.utf8"
export LANG="en_US.utf8"
```

2. If your installer partially ran before failing, your installation directory may not be empty. If so, delete your installation directory.
3. Rerun your installer.

Navigator issues

Navigator fails to update to version 2.6.4

Cause

If you are using Navigator version 2.6.3 and are unable to update to version 2.6.4, it might be because of a dependency conflict between the `anaconda-navigator` package and the `anaconda-toolbox` package. (Each package lists incompatible versions of `anaconda-cloud-auth` as a dependency.)

Solution

To check if you have the `anaconda-toolbox` package, open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
conda list anaconda-toolbox
```

To solve the dependency conflict between `anaconda-navigator` and `anaconda-toolbox`:

1. Close Navigator, if open.
2. Open Anaconda Prompt (Terminal on macOS/Linux).
3. Run the following command:

```
conda install --name base anaconda-navigator=2.6.4 anaconda-toolbox=4.1.0
```

4. Enter `y` to approve the package changes.

> **Tip:** Once your base environment is updated, it is safe to close Anaconda Prompt/Terminal.

5. Reopen Navigator.

Once this dependency conflict is resolved, any future updates to Navigator can be accomplished as usual. See *Updating Navigator*.

Navigator error on start up

Cause

This is often the result of a corrupted `.condarc` file.

Solution

To resolve, delete the `.condarc` file and restart Navigator.

1. Find the `.condarc` file.

   Open Anaconda Prompt (Terminal on macOS/Linux) and enter the command `conda info`. The output will tell you the location of your `.condarc` file(s). You can also search for ".condarc" on your computer.

   The `.condarc` file is frequently found in:

   - macOS: `/Users/<USERNAME>`
   - Linux: `~/.condarc`
   - Windows: `C:\\Users\\<USERNAME>`

2. Optional: Save custom configurations.

   If you had custom configuration in your `.condarc` file before it was corrupted, save the information to add that configuration back to the new file.

3. Delete the `.condarc` file.

4. Restart Navigator.

Issues launching or initializing

Cause

Issues launching or initializing Anaconda Navigator may be caused by permission or licensing problems.

Solution

- If you cannot launch the Anaconda Navigator desktop app via its desktop or application shortcut, you might still be able to launch it via Anaconda Prompt (Terminal on macOS/Linux). Enter the following command:

```
anaconda-navigator
```

- If you have permissions issues, there may be a problem with the hidden licenses directory, `.continuum`. To delete the `.continuum` directory, open Anaconda Prompt (Terminal on macOS/Linux) and run the following command, depending on your operating system:

Windows

```
rd /s .continuum
```

macOS/Linux

```
rm -rf ~/.continuum
```

Then, relaunch Navigator from the desktop app or Anaconda Prompt (Terminal on macOS/Linux).

- If removing the licenses directory does not resolve the issue, manually update Navigator by opening Anaconda Prompt (Terminal on macOS/Linux) and running the following command:

```
conda update --name base anaconda-navigator
```

- If you have updated Navigator and still have problems, remove and reinstall Anaconda Navigator by opening Anaconda Prompt (Terminal on macOS/Linux) and running the following command:

```
conda remove --name base anaconda-navigator
conda install --name base anaconda-navigator
```

- If none of the above work, reset the Anaconda Navigator configuration back to default values by opening Anaconda Prompt (Terminal on macOS/Linux) and running the following command:

```
anaconda-navigator --reset
```

PermissionError on macOS Catalina

Cause

macOS Catalina users may experience permission errors where the system does not prompt you for permission to folders requiring access.

Solution

1. Update Navigator by opening Anaconda Prompt (Terminal on macOS/Linux) and running the following command:

```
conda update --name base anaconda-navigator
```

2. Once updated, have Navigator generate the permissions prompt by launching Spyder and running the following in the console:

```
# Replace <DIRECTORY> with the folder you need access to
import os
os.listdir('<DIRECTORY>')
```

Access denied error

Cause

This is caused by a lock file that sometimes gets stuck and isn't removed when it should be.

Solution

Open Anaconda Prompt (Terminal on macOS/Linux) and remove the lock file by running the following commands:

```
conda update --name base conda anaconda-navigator navigator-updater
anaconda-navigator --reset
```

Navigator buttons are missing

Cause

The disappearance of Navigator buttons may be caused by an out of sync repodata, a corrupt `.condarc` file, or an unknown issue.

Solution

1. Run **Update Index** from the **Environments** page of Navigator.
2. Quit and restart Navigator.

If that solution doesn't work, try one of the following:

- Confirm that your `.condarc` file is not *corrupt*. Specifically confirm that your channel settings contain `defaults`.
- Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

  ```
  conda search python
  ```

  This downloads a fresh copy of the repodata, which should resolve the problem.
- If none of the above options work, open an issue detailing the error.

Trouble logging in to the Anaconda Server connection in Navigator

If you are having issues logging in or know you're logged in but cannot interact with Anaconda Server, try the following solution:

Solution

1. Set `logged_api_url`, `anaconda_server_token`, and `anaconda_server_token_id` in the Navigator config file (`anaconda-navigator.ini`) to **None**.

   Note: The token and token ID config variable names have been updated from `team_edition_token` to `anaconda_server_token` and `team _edition_token_id` to `anaconda_server_token_id` as of Version 2.4.0. If you downgrade your Navigator application to a version older than 2.3.0, you will need to manually change these variable names back to their older versions within your `anaconda-navigator.ini` file.

2. Remove **channel_alias** from the conda configuration file (`.condarc`).
3. Try signing in again.

VS Code is not appearing on the Navigator Home tab

Clause

Anaconda Navigator displays and launches VS Code, and many other applications, through that application's executable file. VS Code's installation should have placed the executable in a specific directory where Navigator is programmed to look. For example:

- Windows User-Only Installation: `C:\\Users\\User\\AppData\\Local\\Programs\\Microsoft VS Code`
- Windows System-Wide Installation: `C:\\Program Files\\Microsoft VS Code`
- Linux-64: `/usr/share/code`
- macOS: `/Applications`

Solution

There are two options for solving this issue:

- Reinstall VS Code to ensure that executable is installed in the default location.
  1. Close Navigator.
  2. Uninstall (if necessary) and reinstall VS Code.

     Note: On macOS, make sure the VS Code application is moved from your Downloads folder to your Applications folder.

  3. Re-open Navigator.
- If you have installed VS Code to a different location than the default, edit VS Code's path in your Navigator user preferences.
  1. Open the Anaconda Navigator Preferences dialog from the top menu bar (such as **File > Preferences** or **Anaconda Navigator > Preferences**).
  2. Scroll down to the VS Code path setting.

3. Enter the path to the installation of VS Code you would like Anaconda Navigator to use. This may be similar to the examples above, especially if you have a user-specific installation you would rather use over your system-wide installation.

   Note: You do not need to enter the name of the executable file itself. Just the path to the folder that contains that file.

4. Close and reopen Navigator.

Anaconda Navigator fails to start and gives Permission denied error

After installation, Anaconda Navigator may fail to start and give you a "Permission denied" error on the anaconda-client configuration file (`/.continuum/anaconda-client/config.yaml`).

Cause

This error is likely due to `anaconda-client` being installed with admin rights. This will lead to incorrect user permissions for the `anaconda-client` config file.

Solution

You can do a few things to solve this. They are listed from most straightforward to most complex.

Delete your .continuum folder

1. Back up your `.config.yaml` file to a different location.
2. Delete your `.continuum` folder.
3. Start Navigator again.
4. Copy your saved `.config.yaml` file back into `/.continuum/anaconda-client`.

Uninstall and reinstall without admin privileges

Uninstall Anaconda and then *reinstall Anaconda* without admin privileges.

Manually change the .continuum folder's user permissions

You will need administrator privileges to do this.

Windows

1. Search for "powershell".
2. Right-click the Windows PowerShell app and select **Run as administrator**.
3. Run the following command:

```
#Replace <USERNAME> with your username
icacls C:\Users\<USERNAME>\.continuum /grant:r <USERNAME>:(i,f) /t
```

macOS/Linux

1. Open your terminal application.
2. Run the following command:

```
sudo chmod 766 /.continuum
```

Navigator gives 'Email verification failed' error 403

Cause

Users with unverified Anaconda.org email addresses can no longer access the API that Navigator and Anaconda Client use to communicate with Anaconda.org. Navigator 2.5.0+ now catches this error and logs you out of your Anaconda.org connection.

Solution

To connect to Anaconda.org again through Navigator, *update your Navigator version* or verify your Anaconda.org account.

Verify your anaconda.org account

To fully resolve the issue, we recommend verifying your account on Anaconda.org:

1. Log in to your Anaconda.org account.
2. If your email is unverified, you will be prompted to verify it.
3. Click **Resend Confirmation Email**.
4. Follow the instructions in the email you receive to complete the verification process.

Navigator fails to start due to "Could not load the Qt platform plugin "xcb" in "" even though it was found" error

Cause

In the CentOS 7 Linux operating system, Orange3 is missing some graphics libraries required by Qt, a framework that Orange Canvas requires to work.

These missing dependencies cause an error when starting Navigator: "Could not load the Qt platform plugin "xcb" in "" even though it was found. This application failed to start because no Qt platform plugin could be initialized."

Solution

1. Open a terminal application.
2. Install the missing system libraries and run updates by running the following commands:

```
sudo yum install xcb-util-wm xcb-util-image xcb-util-keysyms xcb-util-
↪renderutil
sudo yum update
```

Once these libraries are installed and updated, Orange3 should launch correctly on CentOS 7 and the above error should no longer appear when opening Navigator with Orange3 installed.

Disable Anaconda Cloud login reminder

Cause

In Navigator versions 2.5.0 and later, a dialog appears every hour (or every 24 hours as of version 2.6.2) to remind users to log in to Anaconda Cloud, if they are not already logged in. This can be disruptive to users who do not want to log in to Anaconda Cloud.

Solution

There are a few ways to disable the Anaconda Cloud login reminder, depending on your version of Navigator:

2.6.1 and later

Work in *offline mode* or *log into another repository*.

2.5.2 to 2.6.0

1. *Open the Navigator configuration file*.
2. Edit the `cloud_login_popup_state` to be `0` in the `[internal]` section of the configuration file.

```
[internal]
anaconda_toolbox_installed = True
cloud_login_popup_state = 0
```

2.5.0

1. *Open the Navigator configuration file*.
2. Edit the `welcome_state` to be `0` in the `[internal]` section of the configuration file.

```
[internal]
welcome_state = 0
```

Update popup not automatically appearing

Cause

If you are not automatically prompted to update Navigator upon sign in, there can be several reasons why.

- The dialog has been hidden
- Your package index is out of sync
- `defaults` is missing from your channels list

Solution

The dialog has been hidden

You might have clicked **Do not show again** in the Update popup. If this is the only reason your update popup is failing to appear, you should still see the **Update now** option beside **Connect**. To update, click **Update now**.

To have the Update popup appear automatically again:

1. Open **Preferences** from the **File** or **Anaconda Navigator** menu.
2. Deselect **Hide update dialog on startup**.

Your package index is out of sync

Navigator fails to recognize an update is available if your package table is not properly updated. To update your package table, click **Environments**, then **Update index...**.

defaults is missing from your channels list

Not having `defaults` added to your channels list can also cause Navigator's Update popup to fail to appear.

Note: This issue specifically impacts users without a subscription to our premium repository.

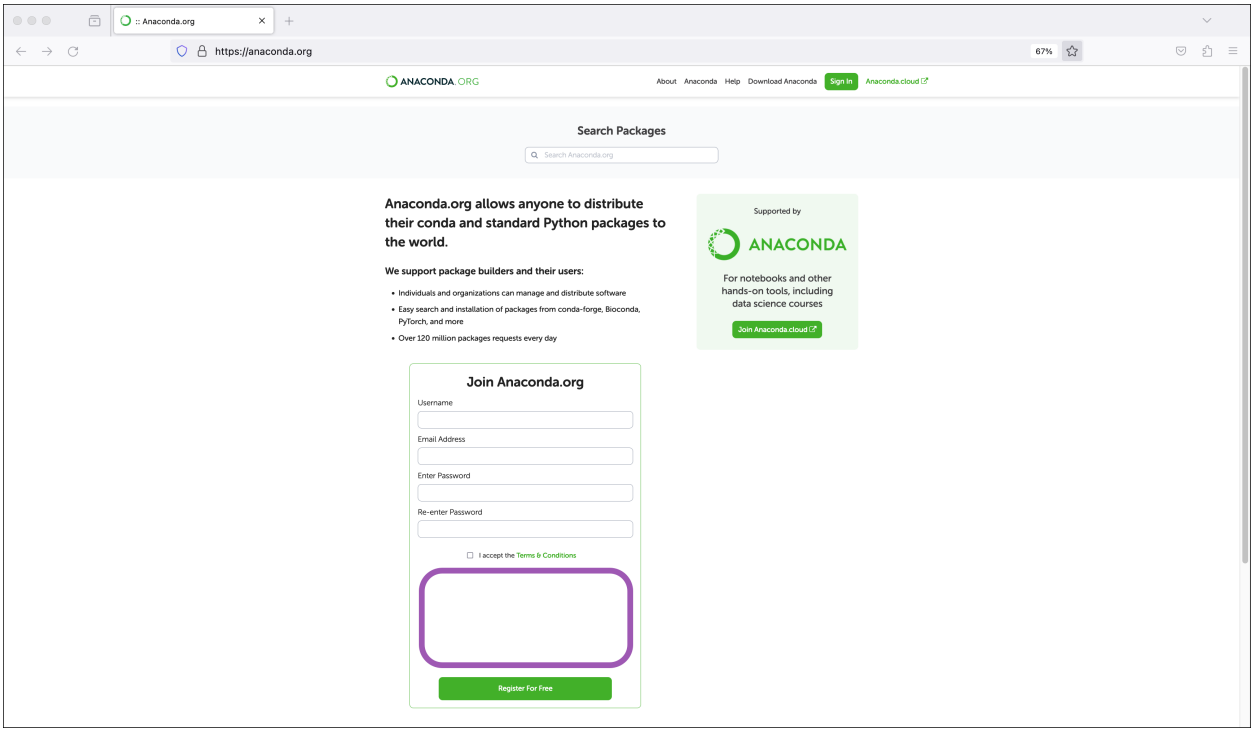
To add `defaults` to your channels list:

1. Click **Channels** on the **Home** or **Environments** page.
2. Click **Add**.
3. Enter `defaults`, then press Enter (Windows)/Return (Mac) on your keyboard.
4. Click **Update channels**.
5. Close and reopen Navigator.

Anaconda.org issues

Captcha not appearing when trying to create an Anaconda.org account on Firefox

The captcha at the bottom of the Sign In panel on Anaconda.org sometimes fails to appear on Firefox browsers.



Cause

The captcha may be blocked by an ad blocker extension, tracking blocker extension, or Firefox's privacy settings.

Solution

1. Refresh your browser and try again. If refreshing multiple times, wait a few seconds between each refresh.
2. Check your extensions. Extensions that block tracking or ads may also block the captcha.
3. Check your browser settings. Privacy settings may block the captcha.
4. Open the sign in page in a private browsing window.

"URI no longer exists and has been permanently removed" 410 error when attempting to upload notebooks or environments to Anaconda.org

Cause

The Notebooks and Environments features have been removed from Anaconda.org as part of an initiative to streamline and improve Anaconda.org and enable the site to focus on package hosting and management. Because of this, notebook and environment files can no longer be uploaded to Anaconda.org using the `anaconda upload` command.

Solution

Although you can no longer upload notebooks to Anaconda.org, you can share your notebooks with others using Anaconda Notebooks instead. Anaconda Notebooks come with their own preloaded *Environments <../anaconda-notebooks/notebook-environments>* and allow you to create your own custom environments as well. For more information on sharing notebooks with Anaconda Notebooks, see *Sharing notebooks*.

2.18.17 Data Collection

Anaconda utilizes some data collection tools to help better understand our users. The following pages explain the basics of these tools and include information on how to disable them.

See our privacy policy for more information.

anaconda-anon-usage

The `anaconda-anon-usage` package enables Anaconda to collect anonymous usage data and is installed with Anaconda Distribution and Miniconda. The package augments the request header data that conda delivers to package servers during index and package requests. The three randomly generated tokens used for this process are designed to reveal *no* personal identifying information. For more specific information on how `anaconda-anon-usage` works, see the package's public Readme file on Github.

Note: The `anaconda-anon-usage` package is not a dependency of conda itself and Anaconda only wishes to collect data associated with usage of Anaconda products. If you exclusively use community installers like Miniforge and community channels like `conda-forge`, you are not affected by this package.

Disabling the package

There are two main methods to disabling the `anaconda-anon-usage` package:

- Set the `anaconda_anon_usage` configuration to `false` in your `.condarc` file
- Set the `CONDA_ANACONDA_ANON_USAGE` environment variable to `no`

Conda configuration command

1. Open Anaconda Prompt (Terminal on macOS/Linux).
2. Disable `anaconda-anon-usage` by running the following command:

```
conda config --set anaconda_anon_usage off
```

To re-enable `anaconda-anon-usage`, run the following command:

```
conda config --set anaconda_anon_usage on
```

For more information on updating your `.condarc` file, see Using the .condarc conda configuration file in the conda documentation.

Conda environment variable

In order to support various platform and shell (terminal) combinations, conda enables several ways to set conda environment variables.

One primary way is by editing your shell's startup script:

1. Open your shell's startup script (e.g. `~/.profile`, `~/.bashrc`, `~/.zshrc`, etc.) in your text editor of choice.
2. Add the following line:

```
export CONDA_ANACONDA_ANON_USAGE=no
```

3. Save the file and restart your shell(s).

Note: Users on Posix-style platforms can also run `export CONDA_ANACONDA_ANON_USAGE=no` in their shell to disable anonymous usage tracking.

For more information on conda's underlying activation classes, see the Conda activate deep dive in the conda documentation.

conda-anaconda-telemetry

The `conda-anaconda-telemetry` plugin enables us to collect more detailed information about how you are using conda. Specifically, it lets us know:

- How you are using the `create`, `install`, and `search` commands
- Which packages are in your active environment when running the above commands, including which version of `conda-build` you are using
- Your configured channel URLs
- Your virtual packages

This information helps us understand environment usage and package popularity, ensuring our repository provides the packages our community needs. Essentially, this plugin helps us learn what we need to know to improve conda for everyone.

Disabling the plugin

If you do not want your conda usage data available to Anaconda, you can disable this plugin by either editing your `.condarc` file or removing the package from your `base` environment.

Edit `.condarc`

1. Open your `.condarc` file in your text editor of choice.

   #### Where is my `.condarc` file?

   To locate your `.condarc` file, open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

   ```
   conda config --show-sources
   ```

   Example return:

   ```
   ==> /Users/<USERNAME>/.condarc <==
   channels:
   - defaults
   ```

   While the `.condarc` is most likely in your Home directory, it is a hidden file, and is not visible in file browsers under normal circumstances. For help viewing hidden files on:

   #### Windows

   For more information on viewing hidden files and folders in Windows, see View hidden files and folders in Windows in Microsoft's documentation.

   #### macOS

   To view hidden files on macOS, use Shift+Cmd+. in your Finder.

   #### Linux

   To view hidden files on Linux, use Alt+. or Ctrl+H (depending on your file manager).

2. Add the following lines to the bottom of the file:

   ```
   plugins:
     anaconda_telemetry: false
   ```

3. Save your changes.

4. Close and reopen Navigator or any Anaconda Prompt or command line windows.

Remove package

Open Anaconda Prompt (Terminal on macOS/Linux) and run the following command:

```
conda remove --name base conda-anaconda-telemetry
```

For more information on the `conda-anaconda-telemetry` package, see https://anaconda.github.io/conda-anaconda-telemetry/.

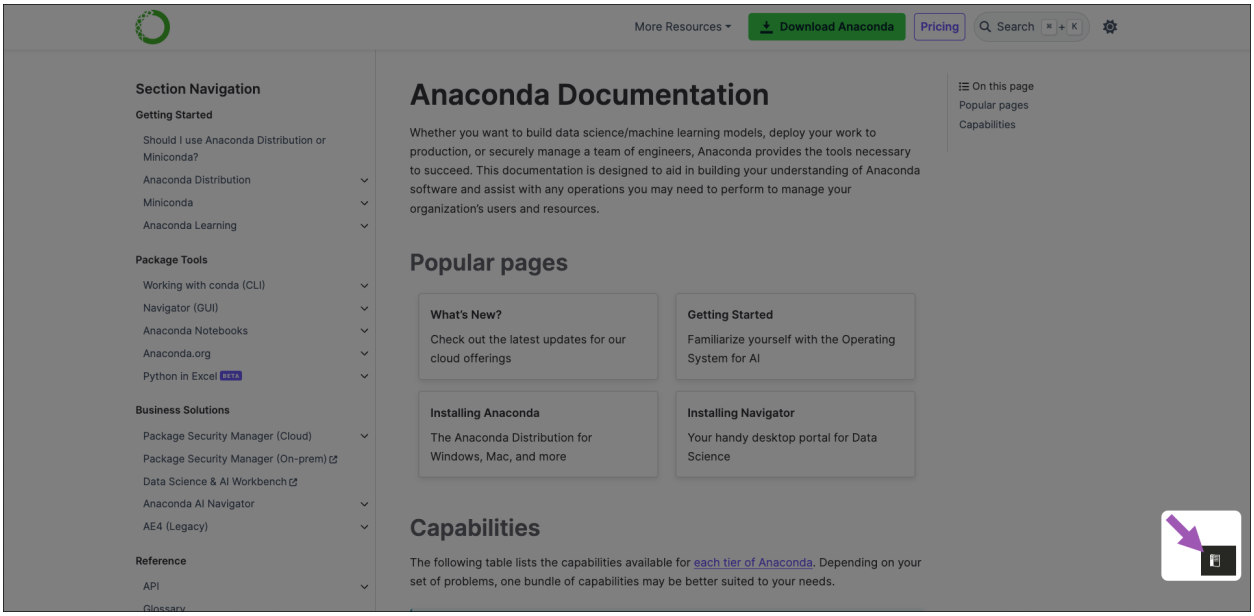
2.18.18 Download our documentation

If you want to view our documentation locally or offline, Anaconda provides you with the ability to either download our documentation directly from our documentation site or install offline copies via the command line interface (CLI).

Documentation

You can download a PDF or zipped HTML copy of docs.anaconda.com by clicking in the lower right corner of any page.

Note: The product documentation for Package Security Manager (On-prem) and Data Science & AI Workbench is hosted in separate repositories from our main repository and is therefore not included in the download. Both sets of documentation can be downloaded from their respective sites.



CLI

You can install offline copies of docs.anaconda.com, business-docs.anaconda.com, and enterprise-docs.anaconda.com by installing the conda package `anaconda-docs`:

```
conda install anaconda-docs
```

This will install a PDF copy and a zipped HTML copy of each site into the directory `share/doc` for your currently active conda environment. For example, if your conda install directory is `~/miniconda3`, and your environment is named `my-env`, the documentation will be installed into `~/miniconda3/envs/my-env/share/doc/`.

To update your locally installed documentation, run:

```
conda update anaconda-docs
```