

Jupyter Notebook Setup for Mac and Tier3

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1 MacOS Setup

Documentation for installing Anaconda locally on Mac [here](#).

[Graphic Installer](#)

[Command Line Installer](#)

If using command line installer: Open a terminal and run the following:

```
shasum -a 256 /path/filename
```

Note: Replace /path/filename+ with your installation’s path and filename. Install for Python 3.7 or 2.7:

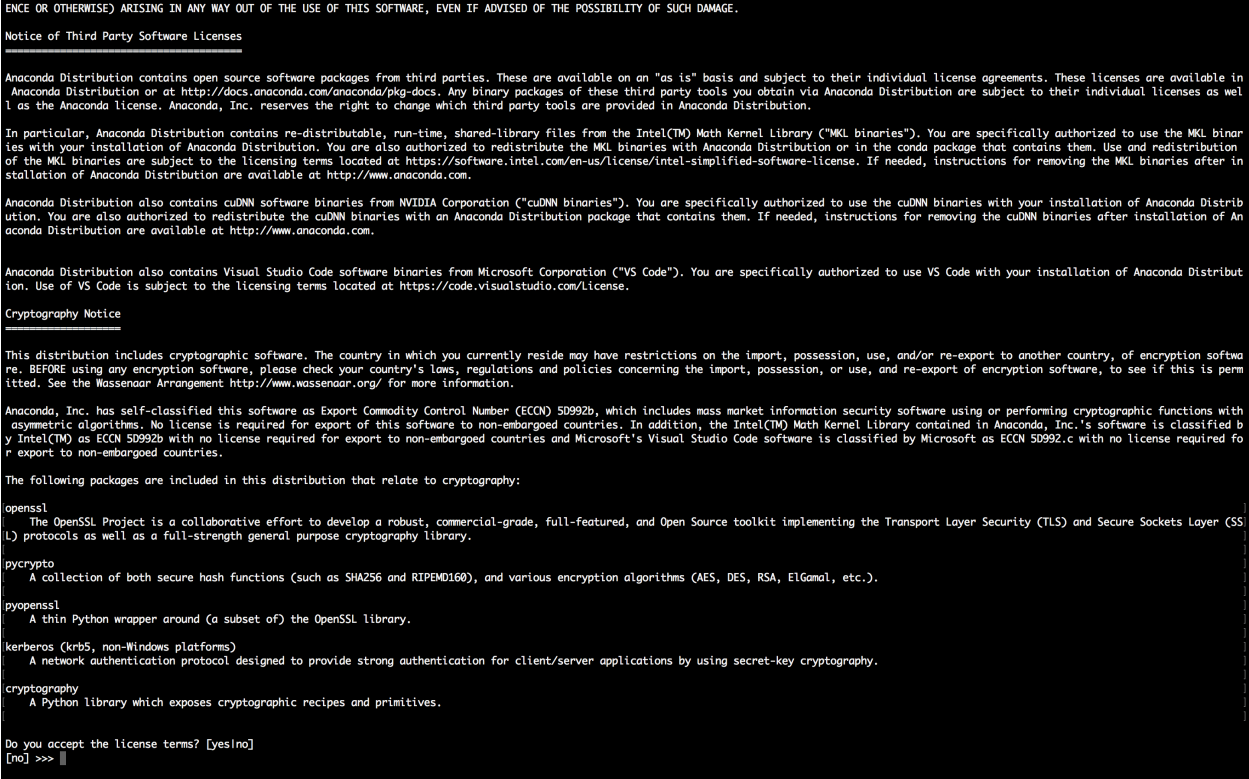
For Python 3.7, enter the following:

```
bash ~/Downloads/Anaconda3-2020.02-MacOSX-x86_64.sh
```

For Python 2.7, enter the following:

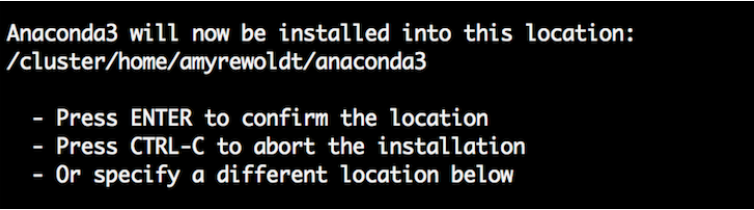
```
bash ~/Downloads/Anaconda2-2019.10-MacOSX-x86_64.sh
```

You should see page that looks like this (you may have to scroll some):



Type yes

You will be prompted to confirm your path to anaconda, as shown below:



Press ENTER to confirm.

You should see something like this when packages begin install:

```
/ -- amyrewoldt@master:~ -- ssh -XY amyrewoldt@hepgw.uta.edu ~ -- bash +
pycrypto
| A collection of both secure hash functions (such as SHA256 and RIPEMD160), and various encryption algorithms (AES, DES, RSA, ElGamal, etc.).
|
|
pyopenssl
| A thin Python wrapper around (a subset of) the OpenSSL library.
|
|
kerberos (krb5, non-Windows platforms)
| A network authentication protocol designed to provide strong authentication for client/server applications by using secret-key cryptography.
|
|
cryptography
| A Python library which exposes cryptographic recipes and primitives.
|
|
Do you accept the license terms? [yes/no]
[no] >>>
Please answer 'yes' or 'no':
>>> yes

Anaconda3 will now be installed into this location:
/cluster/home/amyrewoldt/anaconda3

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

[/cluster/home/amyrewoldt/anaconda3] >>>
PREFIX=/cluster/home/amyrewoldt/anaconda3
installing: python-3.7.1-h0371630_7 ...
Python 3.7.1
installing: blas-1.0-mkl ...
installing: ca-certificates-2018.03.07-0 ...
installing: conda-env-2.6.0-1 ...
installing: intel-openmp-2019.1-144 ...
installing: libgcc-ng-8.2.0-hdf63c60_1 ...
installing: libgfortran-ng-7.3.0-hdf63c60_0 ...
installing: libstdcxx-ng-8.2.0-hdf63c60_1 ...
installing: bzip2-1.0.6-h14c3975_5 ...
installing: expat-2.2.6-h671000_0 ...
installing: freibidi-1.0.5-h7b6447c_0 ...
installing: gmp-6.1.2-h6c8ec71_1 ...
installing: graphite2-1.3.12-h23479e2_2 ...
installing: icu-58.2-h9c2bf20_1 ...
installing: jbig-2.1-hdba287a_0 ...
installing: jpeg-9b-h024ee3a_2 ...
installing: libffi-3.2.1-hd88cf55_4 ...
installing: liblief-0.9.0-h7725739_1 ...
installing: libsodium-1.0.16-h1bed415_0 ...
installing: libtool-2.4.6-h7b6447c_5 ...
installing: libuuid-1.0.3-h1bed415_2 ...
installing: libxcb-1.13-h1bed415_1 ...
installing: tzdata-2019.1-h14c3975_0 ...
installing: tzdata-2019.1-h14c3975_0 ...
installing: tzdata-2019.1-h14c3975_0 ...
installing: mkl-2019.1-144 ...
```

Note: This could take a minute or two.

Once install is complete, type `jupyter notebook` into your command line. A notebook directory containing your local files should open in your default browser.

To close notebook, press `Ctrl+C` then confirm with `y`

2 Tier3 Setup

Login to your tier3 account using the VPN <username>@master.tier3-atlas.uta.edu .

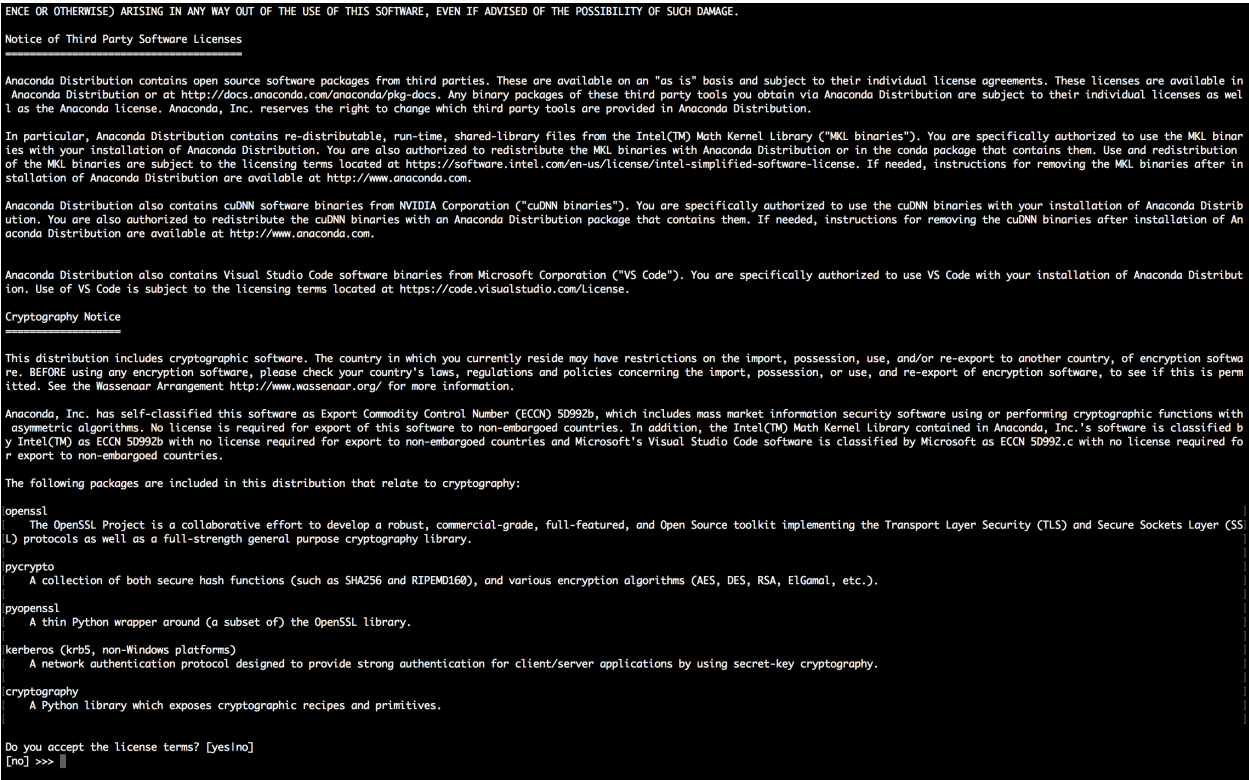
Note: Using the hepgw may give you issues later when opening jupyter notebook in convenient browsers.
Enter `cd /tmp` to change to /tmp directory then download anaconda3 installer here using the following command:

```
wget https://repo.continuum.io/archive/Anaconda3-2018.12-Linux-x86_64.sh
```

Then install anaconda3 by entering:

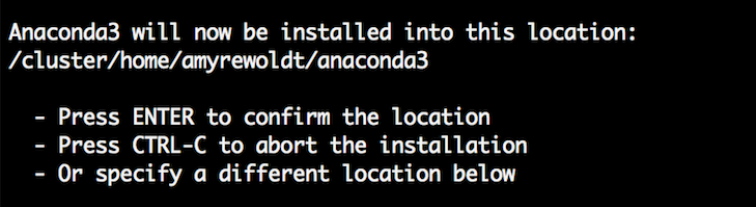
```
bash Anaconda3-2018.12-Linux-x86_64.sh
```

You should see page that looks like this (you may have to scroll some before prompted):



Type `yes`

You will be prompted to confirm your path to anaconda3, as shown below:



Press `ENTER` to confirm.

You should see something like this when packages begin install:

```

/ --- amyrewoldt@master:~ --- ssh -XY amyrewoldt@hepgw.uta.edu
~ --- -bash
pycrypto
  A collection of both secure hash functions (such as SHA256 and RIPEMD160), and various encryption algorithms (AES, DES, RSA, ElGamal, etc.).
pyopenssl
  A thin Python wrapper around (a subset of) the OpenSSL library.
kerberos (krb5, non-Windows platforms)
  A network authentication protocol designed to provide strong authentication for client/server applications by using secret-key cryptography.
cryptography
  A Python library which exposes cryptographic recipes and primitives.

Do you accept the license terms? [yes/no]
[no] >>>
Please answer 'yes' or 'no':
>>> yes

Anaconda3 will now be installed into this location:
/cluster/home/amyrewoldt/anaconda3

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

[/cluster/home/amyrewoldt/anaconda3] >>>
PREFIX=/cluster/home/amyrewoldt/anaconda3
installing: python-3.7.1-h0371630_7 ...
Python 3.7.1
installing: blas-1.0-mkl ...
installing: ca-certificates-2018.03.07-0 ...
installing: conda-env-2.6.0-1 ...
installing: intel-openmp-2019.1-144 ...
installing: libgcc-ng-8.2.0-hdf63c60_1 ...
installing: libgfortran-ng-7.3.0-hdf63c60_0 ...
installing: libstdcxx-ng-8.2.0-hdf63c60_1 ...
installing: bzip2-1.0.6-h14c3975_5 ...
installing: expat-2.2.6-h677090_0 ...
installing: freibidi-1.0.5-h7b6447c_0 ...
installing: gmp-6.1.2-h6c8ec71_1 ...
installing: graphite2-1.3.12-h23475e2_2 ...
installing: icu-58.2-h9c2bf20_1 ...
installing: jbig-2.1-hdba287a_0 ...
installing: jpeg-9b-h024ee3a_2 ...
installing: libffi-3.2.1-h088cf55_4 ...
installing: libtiff-4.0.9-h7725729_1 ...
installing: libsodium-1.0.16-h1bed415_0 ...
installing: libtool-2.4.6-h7b6447c_5 ...
installing: libuuid-1.0.3-h1bed415_2 ...
installing: libxcb-1.13-h1bed415_1 ...
installing: lz4-c-1.8.1.2-h14c3975_0 ...
installing: lzo-2.10-h49e0be7_2 ...
installing: mkl-2019.1-144 ...
```

Note: This could take a minute or two.
You should be prompted again with the following:

```

Do you wish the installer to initialize Anaconda3 in your /cluster/home/amyrewoldt
/.bashrc ? [yes/no]
```

Recommended answer: **yes**
This way each time you login to tier3 anaconda will be initialized and ready to use.

Note: If you enter no, each time you login and want to use anaconda commands or packages, you will have to source your file with command: source <path to conda>/bin/activate

Next you will be prompted with:

```

Do you wish to proceed with the installation of Microsoft VSCode?
```

Enter no

First Use: Either source <path to conda>/bin/activate OR exit tier3 and login again to reinitialize bash script.
Now you will be in conda environment and should have access to jupyter notebook on tier3.

Opening Jupyter Notebook on Tier3 in Any Browser:

Open new terminal and enter:

```

ssh -N -f -L localhost:8000:localhost:8000 <username>@master.tier3-atlas.uta.edu
```

Note: This allows tier3 to 'communicate' with your local machine.
After this, return to tier3 window, enter:

```

jupyter notebook --no-browser --port=8000
```

This tells jupyter notetbook to open without an initial browser and to listen to specified port 8000.

You should see:

```
Kickstarted 17:09 01-Feb-2021
[amyrewoldt@master ~]$ jupyter notebook --no-browser --port=8000
[I 16:43:14.744 NotebookApp] Writing notebook server cookie secret to /run/user/2030/jupyter/notebook_cookie_secret
[I 16:43:15.898 NotebookApp] JupyterLab extension loaded from /cluster/home/amyrewoldt/anaconda3/lib/python3.7/site-packages/jupyterlab
[I 16:43:15.899 NotebookApp] JupyterLab application directory is /cluster/home/amyrewoldt/anaconda3/share/jupyter/lab
[I 16:43:15.902 NotebookApp] Serving notebooks from local directory: /cluster/home/amyrewoldt
[I 16:43:15.902 NotebookApp] The Jupyter Notebook is running at:
[I 16:43:15.902 NotebookApp] http://localhost:8000/?token=30cac477b88bbb3b2f366fb5058088c88325ca4d5d8dc552
[I 16:43:15.902 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 16:43:15.910 NotebookApp]

To access the notebook, open this file in a browser:
file:///run/user/2030/jupyter/nbserver-12183-open.html
Or copy and paste one of these URLs:
http://localhost:8000/?token=30cac477b88bbb3b2f366fb5058088c88325ca4d5d8dc552
[I 16:43:26.733 NotebookApp] 302 GET / (127.0.0.1) 1.31ms
[I 16:43:26.769 NotebookApp] 302 GET /tree? (127.0.0.1) 1.38ms
[I 16:43:37.259 NotebookApp] 302 POST /login?next=%2Ftree%3F (127.0.0.1) 1.75ms
```

In the browser of your choice enter `http://localhost:8000/`

You may be asked to enter a key. Enter the string boxed in blue in the image above (found in your respective terminal window).

Assuming nothing went terribly wrong, you should see your tier3 home directory open in Jupyter.