

How to install python and obspy?

In general refer to:

<https://github.com/obspy/obspy/wiki/Installation-via-Anaconda>

python

First, you need to install python 3. In general, you can install python in whichever way you prefer (e.g. via package management on Debian/Ubuntu), as long as you are able to run Jupyter notebook with obspy (and basemap or cartopy) installed in the end.

If unsure, please install Python 3 (+ Jupyter + Obspy) via Anaconda:

<https://www.continuum.io/downloads>

and download the installation file for python 3.6 (for Linux/Mac/Windows).

Linux/Unix

Then, open a terminal, change to the directory where you have saved the anaconda/python file and install it by executing:

```
bash Anaconda3-4.3.1-Linux-x86_64.sh
```

Consider the comment given at the end of the installation to add the path to your .bashrc file, otherwise you cannot work properly. The .bashrc file is located by standard in your home directory. Just open it with your favorite text editor and add the given text line at any position within the file. Save it and open a new terminal OR load the new content of the .bashrc by typing

```
source ~/.bashrc
```

For obtaining a more „updated“ version of anaconda (incl. more packages in newer versions), add the channel conda-forge

```
conda config --add channels conda-forge
```

Mac

Use the Graphical Installer

Download the graphical installer

Double-click the downloaded .pkg file and follow the instructions

Windows

Download the installer

Optional: Verify data integrity with MD5 or SHA-256 [More info](#)

Double-click the .exe file to install Anaconda and follow the instructions on the screen

One recommendation for Windows users: Do NOT install anaconda in the [C:/programs](#) directory BUT in your home directory. You do not have full write permissions in the program directory which will create problems later.

ObsPy

(Also read the next section if you are using a Mac)

anaconda works with environments. By default you have only a root environment. To keep that environment safe and clean, we create a new environment by typing

```
conda create -n <NAME> python=3.6
```

Replace <NAME> by any name you want to give to this environment. We recommend to add ,36' to this name so that you know this environment is using python version 3.6, e.g. ,obsipy36'.

Then, activate this environment by typing

```
conda activate <NAME>      (sometimes only    activate <NAME>)
```

You can check in which environment you are by typing (command line prompt should also be prefixed with currently active environment name):

```
conda info --envs
```

You should see two lines one starting with 'base' and one with '<NAME>'. The star marks the environment you are in right now (that should be your new environment now). Now, you need to install ObsPy and some additional packages into that environment (cartopy is an optional replacement if basemap if basemap package can not be installed for some reason)

```
conda install obspy jupyter ipython basemap
```

or if basemap package should not be available for your computer architecture:

```
conda install obspy jupyter ipython cartopy
```

Finished!

For Macs (last tried 18/5/2017):

```
# create an anaconda environment with python 3.5 (3.6 not yet supported for the
packages we are interested in)
conda create -n obspy35 python=3.5
# activate the new environment
source activate obspy35
# install the packages
conda install obspy jupyter ipython basemap
# cartopy not available on conda, but it worked from conda-forge (which is a
community-driven site)
conda install -c conda-forge cartopy
```

Finished!!

If you make a mistake and want to start again:

```
# remove an environment
deactivate obspy36
conda remove --name obspy36 --all
```

Usage

Whenever you want to work with obspy, you have to first change into the obspy environment by activating it (see above) !!
After activating the environment you can open the notebook main page by typing:

```
jupyter notebook
```

A new browser window should pop up automatically.

Test

To test everything is working, try the following within a jupyter notebook:

```
%matplotlib inline
import obspy
fig = obspy.read_events().plot()
```

