

Seismic notes

Why seismic sensors:

- really cool way to see what is going on inside the earth
- tell folks about an earthquake before it is felt here (!)
- understand how seismic and tsunami systems work

What you will need:

- computer with internet access
- java installed (see below)

We have several levels of seismic sensors available to us:

1. our own shakenet network of computers around the island and world
2. our own hosting of the Pacific Tsunami Warning Center (PTWC) sensor
3. our access to the Pacific Tsunami Warning Network (PTWN)

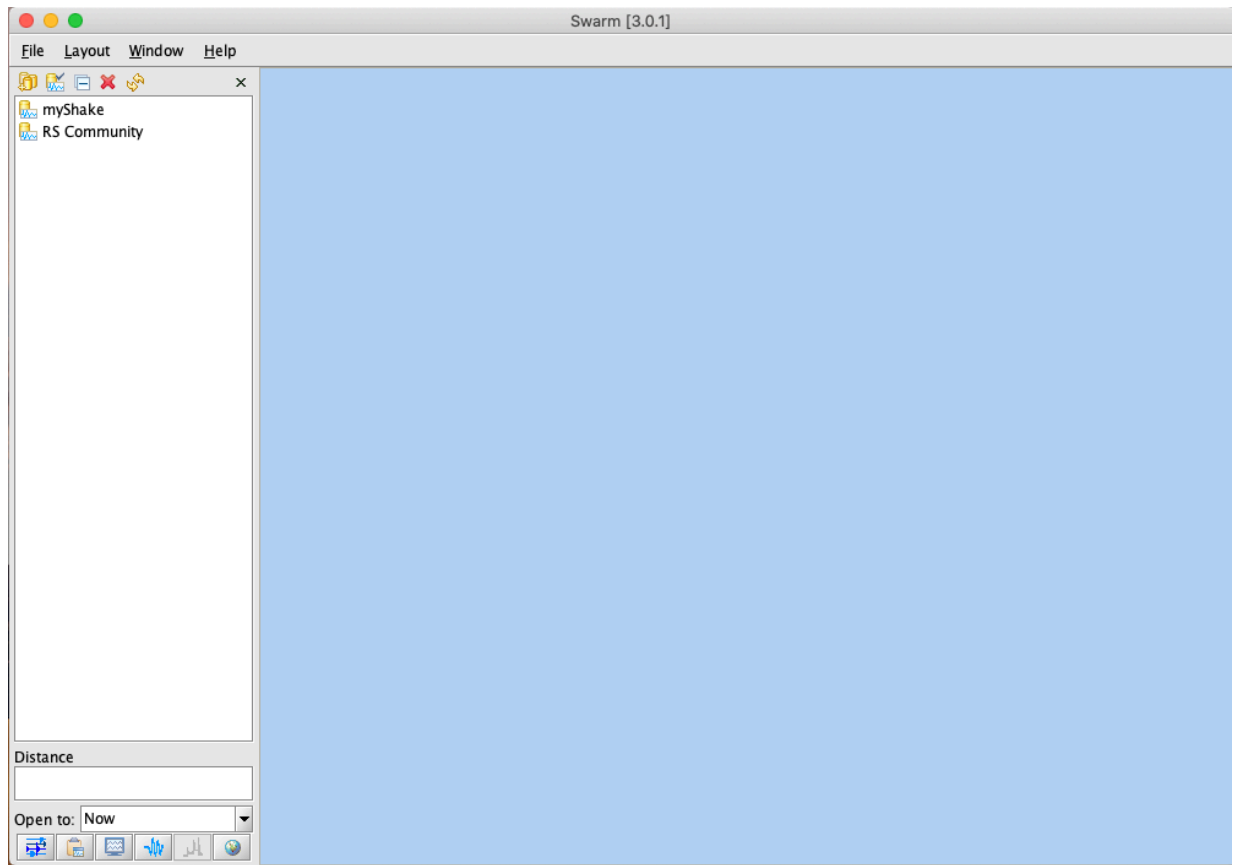
Let's start with the simple one:

Module 1: Shakenet

1. Go to <https://shakenet.raspberrypi.org>
2. look around the planet for sensors
3. go to 10.14.8.10, one of our own sensors
4. note what you see
5. note also "swarm download" at the bottom
6. download swarm

Module 2: Swarm

1. You can either use the version of swarm downloaded (3.1) or the newer one here: <https://volcanoes.usgs.gov/software/swarm/download.shtml>
2. either way, download the compressed folder, which will then expand for you
3. rename it swarm and put it someplace handy, on the macs, this might be the Applications folder
4. Mac users will open terminal, and type the following: `cd /Applications/swarm`
5. type `ls`
6. you should see something named `swarm.sh` in the folder
7. in the terminal, type the following: `sudo chmod u+x swarm.sh`
8. type `./swarm.sh`
9. If there is no java installed, go here: <https://www.java.com/en/download/> to install it on your computer
10. if you were successful, you should see something like this:



11. in the upper left, find the "new data source" window and add the following:

New Data Source

Data Source Name:

Winston Wave Server Earthworm Wave Server FDSN WS SeedLink Server

Use this data source to connect to an Earthworm Wave Server (WSV).

IP address or host name:

Port: Earthworm default: 16022

Timeout: seconds

Gulp size: minutes

Gulp delay: seconds

Tank file time zone:

- click on the new source in the window and look for HPAH, this is the HPA seismic sensor
- watch as it downloads all of the seismic data from the past few days
- play with the controls, and take a screenshot for your notes