Transferring Data

- After logging into the XSEDE Single Sign-On Hub, you can transfer data
  - using various commands in the terminal, including rsync, scp, and sftp
  - using specialized programs, as specified in the user manuals, but this requires installing programs, which you might not want to do
- On the terminal, I recommend rsync because you don't need to copy (and wait for) the whole directory
- A good template is: rsync -Cuavz --port 2222 source_path destination_path
  - Cuavz are options, which can be seen by `man rsync'
  - port 2222 means that you go through the XSEDE SSO
  - the paths have the format user_name@directory/file_name
    - if user_name@ is omitted, it assumes the same user name as on the current system
    - if directory is omitted, the home directory is assumed
    - if file_name is omitted, the whole directory is assumed

- Try copying a local directory with the ubiquitin pdf file and python script for OpenMM


```
Minh-IIT-MBP2018:[~/Documents/GitHub/Chem456/static_files/tutorials]: rsync -Cua
vz --port 2222 ubq-md dminh@data.bridges.psc.edu:/home/dminh/
building file list ... done
ubq-md/
ubq-md/1ubq.pdb
ubq-md/MD_ubq.py

sent 14309 bytes  received 70 bytes  9586.00 bytes/sec
total size is 52573  speedup is 3.66
Minh-IIT-MBP2018:[~/Documents/GitHub/Chem456/static_files/tutorials]: 
```