

# COURSES ON THE HPC CLUSTER AT NORTHEASTERN UNIVERSITY

## LOGGING IN TO THE CLUSTER

Your username is (usually) the first part of your northeastern.edu email  
Your password is (always) your northeastern.edu password

**- From a Terminal Window:**

ssh username@login.discovery.neu.edu

**- Using MobaXterm or Putty:**

username@login.discovery.neu.edu

## OPEN ON DEMAND (OOD)

ood.discovery.neu.edu

View, Copy, Move, Upload, Download files

Files

Check Job Status

Jobs

**- General Use Applications under "Courses"**

Gaussian

JupyterLab (Python)

MATLAB

Maestro (Schrodinger)

RStudio (R)

Unix Desktop

VSCo

## CONDA COMMANDS

**- Load Anaconda Module**

module load anaconda3/2022.05

**- List Conda Environments**

conda env list

conda info --envs

**- Create a Conda Environment**

conda create --prefix=/path/envname

**- Activate a Conda Environment**

source activate /path/envname

**- Remove Unused Packages and Cache**

conda clean --all

**- Delete an Environment**

conda remove -p /path/envname

## COMMON UNIX COMMANDS

Command	Function	Example
ls	list files in directory	ls /courses/course.code/data
cd	change directory	cd /courses/course.code/students/username
mv	move	mv file.text /path/to/move/it/to/file.txt
cp	copy	cp /home/username/file /courses/course.code/students/username
cat	concatenate	cat filename
mkdir	make directory	mkdir homeworkdir1
grep	find pattern	grep "search pattern"file-to-search
head	prints first 10 lines	head filename
tail	prints last 10 lines	tail filename
pwd	print working directory	pwd
man	manual	man ls

## TRANSFERRING DATA USING THE COMMAND: SCP

**- Transfer 'data.csv' from your laptop to the cluster using the transfer node (xfer)**

scp data.csv username@xfer.discovery.neu.edu:/courses/course.code/students/username

**- Transfer 'final.hw.pdf' from the cluster to your laptop**

scp username@xfer.discovery.neu.edu:/courses/course.code/students/username/final.hw.pdf /laptop/path

## SBATCH SCRIPT TEMPLATE

**- Example sbatch script for "courses-gpu"**

```
#!/bin/bash
#SBATCH --nodes 1
#SBATCH --time 6:00:00
#SBATCH --job-name=JobName
#SBATCH --partition=courses-gpu
#SBATCH --gres=gpu:1
#SBATCH --mail-type=ALL
#SBATCH --mail-user=username@northeastern.edu
```

```
# load modules if needed
module load modulename
```

```
# heres where the code runs
code that does stuff
```

## RUNNING JOBS ++

**- Interactive Job Using Srun**

srun -pty /bin/bash -t 3:00:00 -p courses

**- Check Job Status**

squeue -u username

**- Cancel A Job**

scancel jobid

**- Working With Modules**

module list

module avail

module load

module remove

**- List All Files Including Hidden**

ls -lha

**- Check Storage Usage of /home**

du -h --max-depth=1 /home/username

## TROUBLESHOOTING (OOD)

**- Job moves from in queue to completed**

Check the storage use of /home.

Remove conda init statement in your home/username/.bashrc file if present.

Move /home/username/.local to /home/username/.local-off

**- 504 error**

Open the OOD dashboard in a "New Incognito Window"

If incognito works clear your browser cookies

**- App Sometimes Doesn't Launch**

select "Restart Web Server" under the Develop tab

**- "Disk Quota Exceeded"**

You've exceeded the 75 GB limit in your home. See our documentation under "Best-Practices" for tips on keeping your /home under quota

**- "Bad Request"**

The browser is trying to load a previously cached page that can no longer be found.

Paste the address [ ood.discovery.neu.edu ] in the browser search bar and reload the page.

## GET HELP FROM RESEARCH COMPUTING

Send an email to rchelp@northeastern.edu

Visit <https://rc-docs.northeastern.edu/en/latest/index.html> for more detailed information on the topics here and more.