

## **Biol 545 Lab 0.5**

Helpful linux commands and command line basics.

For most labs this semester, we will be using the standalone servers through UIdaho RCDS (<https://hpc.uidaho.edu/compute/Hardware/Standalone.html>). For standalone servers we do not need to use Slurm, and everything can be run on the server command line. All UIdaho students should already have an RCDS account setup, and temporary accounts have been requested for all non-UIdaho students.

When connected to campus wifi, you can log in directly using your ssh client (terminal for mac; powershell/command prompt/windows subsystem for linux/PuTTY for windows OS). To log in while off campus, you will need to set up a VPN through RCDS. (<https://hpc.uidaho.edu/compute/Tutorials/VPN.html>).

### **Important linux commands**

ssh username@ford.hpc.uidaho.edu - remote sign into cluster (can use ford or any other standalone server, see link above).

scp "source location" "sink location" - transfer files to and from local device/cluster, must be done from local terminal. add -r flag to transfer entire directories (folders).

sftp username@ford.hpc.uidaho.edu - alternative file transfer protocol. Creates a file transfer session on local device. transfer files to and from local directory until sftp session is closed. Can change remote directory while in sftp. Use "put" to transfer files to remote server and "get" to transfer files to local directory.

cd "path to new working directory" - change working directory to subdirectory, use cd .. to go up a directory.

ls - list the contents of working directory.

mkdir "new directory name" - make a new directory.

rm "file name" - permanently delete a file, can use recursive flag (-r) to delete entire directories.

cp "file to be copied" "new location/name for copied file" - make a copy of a file.

mv "file/directory to be moved" "new location for file/directory" - move a file or directory without making a copy, can also be used to rename.

pwd - provide full path to current working directory.

module avail – list the available modules installed on RCDS server.

module load – load installed software module.

For a more comprehensive list of functions, see (<https://cheatography.com/davechild/cheat-sheets/linux-command-line/>).