

Linux Quick Guide

Workshop Website: <https://uwec.ly/hpcworkshop>

The Prompt

The command prompt is the first thing you see on a Linux system. It tells you which user you are logged in as, what server you are using, and where you are currently located in the files.

[<user>@<machine> <folder>]\$ <type your command here>

Commands

Useful list of basic commands. This is certainly not a full list of everything you can do.

Command	Name	Description
getfiles <session#>	Session Files	Download the files for the current workshop session
man <command>	Manual	Detailed guide for how to use any command
pwd	Print Working Directory	Shows where you currently are located on the server. AKA “where am I?”
cd <go/to/folder>	Change Directory	Change which directory you are currently in
ls ls -l ls <directory>	List Directory Contents	List the files or folders in the current directory or a different one. Include “ls -l” (lowercase L) for more details on the files.
mkdir <directory>	Make Directory	Make a new directory
cp -r <copy/from> <copy/to>	Copy	Copy a directory or file(s) from one location to another The “-r” means recursive, which is required when copying a folder
touch <file>	Create Empty File	Creates an empty file with nothing in it
history	Command History	Shows all the commands you previously typed
sbatch <script.sh>	Submit Script	Submit a Slurm script to our computing cluster

Terminal Tips

Extra functionalities to be aware of when using a terminal session. Many will streamline usage.

- Up/Down Arrow Keys – see previous/next command you typed
- Left/Right Arrow Keys – move cursor left/right (mouse does not function in terminals)
- Tab – auto-complete the name of files or programs, double-tap tab shows matches for non-unique cases

Interested in learning more about high-performance computing or Linux? Check out our website at <https://uwec.ly/hpc>, stop by Schofield 103, or email us at BGSC.ADMINS@uwec.edu.

Paths – Absolute vs Relative

Knowing how to navigation a Linux-based file system is very important, especially when it comes to identifying and using absolute vs relative paths. Paths are used in a lot of commands.

Absolute	Relative
Starts with a “/”, which means “beginning of server”.	Does not start with a “/”, which means “starting where I currently am”.
Examples: /data/groups /data/users/<username>/my_dir /data/users/<username>/my_file.py	Examples: my_dir/folder_1 ./my_dir/folder_1 ../folder_2
Absolute is exact and specific, which means it doesn't matter where you are when you run it. It always refers to the same file or directory.	See those periods?
You can use “pwd” to get the absolute path of your current directory.	Single “./” = Start right where I am Double “../” = Go back (or “up”) a directory You can do “../../..folder” to go up 3 times.

Open OnDemand

Open OnDemand is the web-based platform to access the university's BOSE supercomputing cluster.

OnDemand Website: <https://ondemand.hpc.uwec.edu>

App	Description
BOSE Cluster Shell Access	Where you can run any commands on the server
Home Directory	Access to all of your files to edit or copy them
Jupyter Notebook	Where you'll be experimenting and running Python code
Jupyter Notebook is available on the home page as well as under “Interactive Apps” <ul style="list-style-type: none">- Accounting Group: Make sure your research group or class code is selected.- Slurm Partition: Week (7 Days) - Default- CPU Cores: 1- Memory: 5G- # GPU Cards: No GPUs- Number of hours: How long you intend to actively use Jupyter at the time.<ul style="list-style-type: none">o Note that it'll stop once you hit the time limit, in which case you can just submit the form again to pick up where you last saved.- Working Directory: Leave blank- Launch – Start Jupyter Notebook	
My Interactive Sessions (Top Bar)	Where you can access your Jupyter Notebook

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