

Linux Cheat Sheet

Note: text within <> indicates case specific information that you need to modify, such as specific file names or directory paths

You will be assigned to one of three servers. The <servername> referenced below will be one of the following:

comtrain.med.psu.edu
ri_sb2.hersheymed.net
ri_sb3.hersheymed.net

Logging on to the Linux Server

ssh <psuid>@<servername>	#connect to server to do work
ssh -XY <psuid>@<servername>	#connect to server with X11 tunneling enabled (necessary for programs such as IGV). Need to configure computer for this.

Copying files to and from the server – only copy to your M drive

Option 1: using secure file transfer protocol (sftp):

sftp <psuid>@<servername>	#connect to server to transfer or download files
Once logged in via sftp:	
put <filename>	#copies file to the server
put -r <directoryname>	#copies all files in folder on local directory (i.e. your computer) to server
get <filename>	#copies file from server to local directory
get -r <directoryname>	#copies all files in directory to local directory
lpwd	#tells you current local directory
lcd <local directory path/name>	#change local directory

Option 2: using secure copy protocol (scp)

scp <localfilename> <psuid>@<servername>:~/	#copies file from local directory to server
scp -r <localdirname> <psuid>@<servername>:~/	#copies all files in local directory to server

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scp <psuid>@<servername>:~/ <localfilename> #copies file from server to local directory

scp -r <psuid>@<servername>:~/ <localdirname> #copies all files in directory from server to local directory

Option 3: use Filezilla (<https://filezilla-project.org>) or Winscp
(<https://winscp.net/eng/download.php>)

Directory Commands

mkdir <directory name> #create new folder

cd <directory name> #change directory

pwd #tells you current directory

ls #list files in directory

ls -l #list all files in directory with details (e.g. permissions and size)

ls -lh #same as ls -l, except size will be in "human" terms

rm <filename> #deletes file; if want to delete directory, use -r option

cp <filename> <newfilename> #copy file to new file; if want to copy directory, use -r option

mv <filename> <newfilename/path> #rename file or move to different directory

Exploring files

cat <filename> #prints entire file to screen

less <filename> #view file contents a little at a time
press space bar to advance, q to quit

more <filename> #similar to less, but shows more

head <filename> #shows first 10 lines of file

head -n <number> <filename> #shows first <number> -whatever you type> lines of file

tail <filename> #shows last 10 lines of file - also has same -n option as head

wc -l #prints number of lines of a file

grep <pattern> <filename> #search for text in a file - output prints lines containing pattern to screen

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grep -v <pattern> <filename>

search for lines in file that do not contain pattern – output prints to screen

Other useful commands

> <filename>

#instead of printing output to screen, can save it to a file – warning, this will overwrite any file with the same <filename>

>> <filename>

#instead of printing output to screen, will save it to file. This will append the information to any file with <filename>

|

#pipe (shift \ on your keyboard) – allows you to chain commands eg ls | wc -l will tell you how many files are in your directory (ls – prints files and wc -l counts the number of lines – only the last command prints to screen)

exit

#logs out of current session

CTRL+c

#halts current command

CTRL+z

#stops current command, resume with fg in the foreground or bg in the background

Working with modules and programs

(sometimes programs are loaded as “modules” which need to be “loaded” to use)

module avail

#lists available modules

module load <module name>

#loads module

Shortcuts

CTRL+a

#move to beginning of line

CTRL+e

#move to end of line