

Linux cheat sheet (Melanie Vollmar, 2015)

Command	options	What it does
Help		
man	ls	Loads manual page for ls command
Navigation		
pwd		Print working directory → tells you where you are; which folder you are in
cd		Change directory; and gets you to your home directory; '~'
cd	..	Gets you one directory level higher
cd	.././to/my/file	Relative path
cd	/get/me/to/my/file	Absolute path
cd	/	Gets you to 'Computer'; '/'
Working with files and directories		
ls		List files in current directory
ls	.././to/my/file	List everything in directory file
ls	-l	Detailed list of files
ls	*.img	List all files in file format .img
file	aimless.log	Show file type of aimless.log
more	aimless.log	Open file in shell to scroll using space bar; no editable
less	aimless.log	Open file in shell to scroll using space bar; no editable
head	-20 aimless.log	Show first 20 lines of aimless.log
tail	-20 aimless.log	Show last 20 lines of aimless.log
gedit	aimless.log	Opens aimless.log in a graphical text editor
vi	aimless.log	Opens aimless.log in a command line text editor
display	1.img	Opens image file; also works for .png/.ps/.pdf
cp	1.img 1a.img	Create a copy of 1.img with new name 1a.img
cp	../34.img .	Copy file 34.img from one level up into here (present directory)
cp	-r data data_old	Create a copy of data and

		everything in it with new name data_old for directory
ln	-s ../../to/my/file .	Create a symbolic link to file in the present directory
mv	1.img XX.img	Rename file 1.img to XX.img
mv	1.img ../../to/my/file	Move/relocate 1.img into directory file
mkdir	data	Create a directory called data
rm	1.img	Delete file 1.img
rm	-r data	Delete directory data and all files and subdirectories
Permissions		
chmod	u+x create_directory.com	Change mode of file create_directory.com and make it executable for user
chmod	777 create_directory.com	Give read/write/execution permission to everyone
Searching and finding		
find	* -name 1.img	Search current directory for a file named 1.img
grep	"find.*me" aimless.log	Find all lines in a file containing both words "find" and "me" in this order
grep	-v "ANISOU" my.pdb > new.pdb	Get all lines not starting (verbose) with "ANISO" in my.pdb and write them in new file new.pdb
Compress/Decompress		
tar	-zcvf th_8_2.tar.bz2 th_8_2	Creates a compressed folder th_8_2.tar.bz2 containing directory th_8_2 and all its files
tar	-xzvf th_8_2.tar.bz2 -C th_8_2	Decompress all files in compressed folder into folder with same name in current location
gzip	1.img	Compresses file and changes file name to 1.gz
gunzip	1.gz	Decompresses 1.gz back to 1.img
Remote access		
ssh	-Y myFedID@nx.diamond.ac.uk	Remote connection to Diamond's NX services for users being able to use X11 and hence graphics
scp	my_file.log myFedID@nx.diamond.ac.uk:/absolute/path/to/target/directory	

scp	ghp45345@nx-staff.diamond.ac.uk :/home/ghp45345/linux_tutorial.com .	Copies file linux_tutorial.com on my Diamond Desktop to current location
Job control		
top		Lists all jobs by CPU usage
ps	-u	Show all of my process in all shells
ps	-f -u	Show all of my processes in current shell
kill	-9 2773	Kill process with job ID 2773
echo	\$PATH	Programs set in your PATH
vi	~/bashrc	PATH definition and local settings
Shortcuts		
Ctrl+C		Halts current command
Ctrl+Z	Followed by fg or bg	Pauses current command and continues either in the foreground (fg) or background (bg)
tab		autocomplete
history		Gives history of most recent commands
		Move up and down between commands used

A bit of vi

i → gets you into insertion mode and you can edit the text

v → visual mode → you can select text

esc → leave any mode and get back to normal mode

:w → save

:q → quit

:q! → leave without saving changes

v+i+w → select a word

v → move cursor to select a word → y to copy → move cursor to new position →

p for after current position and Shift+p before current position

v+i+(→ everything in a bracket

v+i+' or " → everything in the quotes

Ctrl+v at cursor position use arrows to define a block followed by d to delete

Ctrl+v select under cursor then Shift+I type new text esc → text added before block

dd → delete line and move to insertion mode

Shift+v → select whole line

gg → top of document

Shift+g → bottom of document

50% → half way down document

10+Shift+g → line 10

zz → centering in window

/anyword → case sensitive forward search starting from cursor position

?anyword → case sensitive reverse search starting from cursor position

esc followed u → undo

esc Ctrl+r → redo

How to use “module” to run programs

module	avail	Available modules/programs at Diamond
module	list	List of modules you have already loaded
module	load R/3.0.0	Load statistics program R version 3.0.0; needed to run BLEND
module	load XDS	Loads integration program XDS (default version)