

UNIX Command Cheat Sheet

Carnegie Observatories Summer Research Program

Every command and filename is CaSe sEnSiTiVe!

Command	Description	Examples and Options
<tab>	Attempt to autocomplete	Use this to speed up typing/avoid typos
<i>Navigating Directories</i>		
ls	List the contents of the directory.	ls -larth /home/mcuser/science/code
cd	Change directory.	cd /home/mcuser/science
pwd	present working directory.	pwd
*	Wild card, any number of chars.	ls *.txt
?	Wild card, 0 or 1 characters.	ls foo?.txt
.	Current directory.	cd .
..	Directory one level up.	cd ..
~	Home directory.	cd ~
-	Previous directory.	cd -
<i>Modifying Directories and Files</i>		
mkdir	Make new empty directory.	mkdir MyNewDirectory
rmdir	Remove empty directory.	rmdir MyNewDirectory
mv	Move files (overwrites destination).	mv -i foo.txt foo2.txt
cp	Copy files (overwrites destination).	cp -i ../foo.txt .
rm	Remove files. CANNOT UNDO!	rm -i foo.txt
chmod	Change file permissions. rwx = read, write, execute. ugo = user, group, other, all.	chmod a+rwx badger.txt chmod o-wx badger.txt chmod u+x myscript.sh
<i>Viewing Files in Terminal</i>		
less	View files in terminal window.	less foo.txt
cat	Concatenate files.	cat foo1.txt foo2.txt
head	Display first 10 lines.	head -20 foo.txt
tail	Display last 10 lines.	tail -f logfile.txt
<i>Searching</i>		
grep	Search for word(s) in a file.	grep myvarname *.txt grep rodent *.txt grep "Hello World" *.txt
find	Search a path for files/directories that match some specification.	find playground -name "*.txt" find playground -type d find playground -not -name "*.txt"
<i>Environment Variables</i>		
\$HOME	Home directory.	workpath=\$HOME/playground
\$SHELL	Shell name.	echo \$SHELL
\$USER	User name.	echo \$USER
\$PATH	Paths to look in for executables.	PATH=\${PATH}:/my/new/program/path/bin
env	List environment vars and values.	env less

Common text editors: emacs, vim, vi, pico, nano

Command	Description	Examples and Options
<i>File Manipulation</i>		
wc	Word count.	wc -l mycode.py
sort	Sort input alphanumerically.	
	Pipe/filter output through another program.	cat foo.txt less sort myfile.txt grep mykeyword
>	Redirect standard output to. Overwrites existing file.	cat foo.txt > foo2.txt
>>	Redirect standard output and concatenate to.	cat foo.txt >> foo2.txt
<	Redirect standard input from.	less < foo.txt
awk	Advanced operations by column.	
sed	Advanced operations by row.	
<i>Job/process Manipulation</i>		
&	Run process in background.	./run_job.sh &
jobs	Show your current processes	jobs
ps	Show processes (more flexible)	ps -u username
top	Show top active processes	top -u username
kill	Stop a job	kill processid
Ctrl-z	Pause current job	./run_job.sh; Ctrl-z
Ctrl-c	Cancel current job	./run_job.sh; Ctrl-c
bg	Resume process in background	./run_job.sh; Ctrl-z; bg %1
fg	Bring process to foreground	fg %2
<i>Remote Connections</i>		
ssh	Secure shell login.	ssh -Y user@host.edu
scp	Secure copy.	scp user@host.edu:path/to/file.txt .
wget	Download file from remote URL.	wget www.google.com -O google.html
Ctrl-d	Exit login. Sometimes disabled.	Can also use exit, logout
<i>Miscellaneous</i>		
man	Manual for other commands.	man cat
sleep	Do nothing	sleep 30
touch	Create empty file/update timestamp	touch newfile.txt
whoami	Print current user.	whoami
du	Disk usage.	du -shc mydirectory/*
df	Disk free.	df -h
diff	Shows differences between two files.	diff -w file1.txt file2.txt
echo	Write text to screen.	echo "Hello? Can you hear me?"
which	Find path for command.	which gcc
tar	Compress/uncompress files.	tar -zcvf files.tar.gz a.txt b.fits tar -zxvf downloadedstuff.tar.gz
history	See command history.	history grep myscript.py
alias	Create command shortcut.	alias lrt='ls -lhrt'
source	Execute file in shell.	source ~/.bash_profile