Linux Command Line Reference Guide

Interacting with the file system

`ls`	list files in directory
`ls -al`	list all files in directory, details in long format
`cd dir`	change directory to dir
`pwd`	print working directory
`mkdir dir`	make directory named
`rmdir dir`	remove directory (if empty)
`rm file`	remove file
`rm -rf dir`	remove recursively and force full delete in dir (be careful which directory you tell it to delete!)
`cp file1 file2`	copy file1 to file2
`mv file1 file2`	move (or rename) file1 to file2
`ln -s file link`	link symbolically file with new name link
`alias name= 'command'`	use name as a shortcut way to run command (e.g. alias ll='ls -alh --color')
`alias`	see list of available commands using aliases

Interacting with files

`touch file`	create empty file named file
`cat file`	print all contents of file
`more file`	show contents of file in interactive reader (press q to quit)
`head file`	show first 10 lines from file
`tail file`	show last 10 lines from file
`wc file`	word count of file (output is lines, words, bytes in file)
`command1 | command2`	"pipe" output from command1 to be input of command2
`command > file`	redirect output of command1 to new file named file (use >> to append)
`nano file`	open file in the nano editor

Extracting information from files

`grep needle haystack`	search for term needle in file haystack
`awk '{print $3}'`	print values of column 3 of output (usually used with pipe command)

Learning about current system

`uname -a`	show "all" current operating system information (OS name, kernel #)
`date`	show current date and time (date +"%r" to only show time)
`uptime`	show how long system has been running
`w`	show all users current logged in
`whoami`	show current username
`cat /proc/cpinfo`	display information about CPU
`cat /proc/meminfo`	display information about RAM
`man command`	show "manual" guide for command (press q to quit)
`which command`	show location of command

Interacting with processes

`ps aux`	show all processes, by all users, that are executing
`top`	show active processes sorted by resources used (press q to quit)
`kill pid`	terminate process number pid
`kill -9 pid`	forcefully shutdown process number pid (crash program, do not wait)
`killall proc`	kill every process associated with proc
`bg`	stop job and send to background
`jobs`	show list and status of jobs
`fg 2`	bring job number 2 to foreground

Changing privileges on files

`chown user file`	change owner of file to user
`chmod +x file`	change file mode, set file as executable
`chmod -w file`	remove write access for file
`chmod 644 file`	set read, write for owner; read-only for group and world for file
`chmod 777 file`	set read, write, and executable for owner, group, and world for file Permissions: 4 = read , 2 = write , 1 = execute , 0 = no privileges Use 3 digits for owner, group, world

Recalling previous commands

`history`	show previous commands
`history 10`	show 10 previous commands
`!73`	run previous command numbered 73 by history command
`!!`	run last (most recent) command again

Root access

`sudo command`	switch user (to root or superuser) and do the following command Must be in "wheel" group to use sudo

Zipping and archiving files

`tar cf file.tar files`	Create file.tar by compressing files and storing them in it
`tar xf file.tar`	Extract files in file.tar
`tar czf file.tar.gz`	Create file.tar by compressing files with gzip and storing them in it
`tar xzf file.tar.gz`	Extract files compressed with gzip from file.tar.gz

Maintaining user accounts

`adduser username`	create user account for username
`password username`	set password for username (only root can change other user's passwords)