Unix BASH Basics

- Press "Ctrl C" while a command is executing to stop that command.
- Use the 'up' arrow to get the last command.
- Use the tab key to autocomplete commands or file paths.
- Press "ctrl r" to search your command history for a command you already ran.
- "sudo" means "superuser do," and it allows you to run more serious commands. When you run a command without sudo and get an error message saying something to the effect of "permission denied," you need to add sudo onto the front of your command.

Commands

Command	Purpose	Useful Options or Example
ssh	Start an Open Secure Shell session on a remote computer.	Example:ssh pi@192.168.1.23(SSH into 192.168.1.23 as user pi)
echo	Prints input back to output	echo "hello world!"
which	Prints location of command	which which
pwd	print working (current) directory	
ls	list files and directories	ls -a(View hidden files/directories), ls -lah (View size/user/permissions)
mkdir	Make a directory	
cd	Change directory	cd ..(back one directory) cd /(to root directory) cd ~(to home directory) cd -(to the directory you were in before)
less	View file contents (scrollable)	less example.txt
cat	View file contents (plaintext only)	cat example.txt(view the contents of example.txt)
grep	Search for text	Example: grep keyword example.txt (search for "keyword" in file example.txt).
|	Combine commands	cat example.txt | grep keyword (View contents of example.txt and search for the text keyword) man nmap | grep -- -pn(View the nmap man page and search for the -pn option).
find <directory> -name<direc_or_file_name>	find a directory or file in any subdirectory	Find /var/www/html -name index.php

`cp <file to copy> <new file name>`	Copy a file	copy /etc/passwd ~/users.txt(copy the users config file to a file called "users.txt")
`mv`	move a file or directory.	`mv apple.txt tree/`(move apple.txt into tree directory)
`rm`	Delete a file or directory.	Use -rto delete directories (r for recursive).
`man`	view manual page for a command	Example:man nmap(shows nmap's manual page)
`w`	list currently logged-on users.	
`last`	Look at recent logins	Try"sudo lastb"to include failed attempts
`getent`	Look at entries in important 'database' files	getent passwd
`md5sum`	Find the md5 hash of a file.	Use this for downloaded files.
`top`	View processes and their resource usage in real time.	Also try "htop" for a more interactive/pretty UI
`ps aux`	View current processes with PIDs and users.	
`df -h`	Print hard drive usage.	
`free -h`	Print memory usage	
`kill`	Kill a running process	`kill 3692`(Kill process with PID 3692)
`systemctl`	Start,stop, restart, and check status of services	Example: `systemctl status nginx` `Systemctl start nginx`
`ss`	Shows network socket statistics	Emample: sudo ss -tulpn
`ip address show`	Print IP address and MAC addresses.	The ip command can do lots more too!
`hostname`	Print hostname.	
`adduser`	Add a user.	
`deluser`	Remove a user.	
`groups`	See what groups your account is in.	
`whoami`	See what your username is.	
`passwd`	Change the password of the current user.	
`curl <url>`	Retrieve content & print to terminal	`curl parrot.live`
`wget <url>`	Download content	`wget wttr.in -O weather`
`apt update`	Update package lists.	Example:sudo apt upgrade

apt upgrade	Upgrade all installed packages	Example: sudo apt upgrade
apt install	Install a new package	Example:sudo apt install nmap
apt-cache	Search the package list	Example:apt-cache search nmap*
apt remove	Remove package and dependencies	Example:sudo apt remove nmap
`exit`	Exit the current shell session	
`sudo poweroff`	Shut down the computer.	

Config files

Config file	Purpose
/etc/passwd	Users, with their shells and home dirs
/etc/shadow	Contains hashed passwords (need to be root to read)
/etc/sudoers	Users and groups that have sudo access. Edit with the "visudo" command
/etc/ssh/sshd_config	Config for the SSH Server
/etc/hosts /etc/resolv.conf	DNS configs
/etc/crontab	One, of several, config files for scripts and commands that run on timers
/etc/nginx/nginx.conf	Default nginx site config on CentOS

Vim Basics

Vim is the dominant Linux terminal text editor. If you want a more user-friendly text editor, use nano.

Open a text file: vim example.txt

Vi defaults to "command mode," in which you enter commands, but do not enter text.

Command mode:

- :w   Write the changes you made to the file
- :q   Quit the file
- :q!   Force quit the file
- :x   Write changes and quit
- dd   Delete current line
- yy   Copy current line
- p   Paste
- /keyword   Search for keyword in the document (press n to view next search result)

To enter "insert mode," press "i"

You can now enter text into the document.

To re-enter command mode, press "esc"