Why learn Linux?

Do a lot more from the terminal

Manage servers

Alter permissions

Its faster Automate tasks

Available anywhere

Coding needs you to use the command line

Why on mac and linux and not windows?

Linux comes from unix

Windows doesn’t come from unix

True Unix – is certified

Unix like is not certified

Linux is just a Kurnel

Ubuntu is just a linux distributor

Linux is opensource

A Shell exposing the operating system to the user

Terminal is a peace of software and uses a shell and the passes it to the operating system

Whoami-the user that is currently logged in

Man- manual

Clear -clears the terminal we can also do man clear that gives us more info about the clear command

Clear -x –clears but keeps the history

Control L- is a shortcut

Pwd- lets us know where we are in a directory

Ls-list the contents of a folder

Ls – with a folders name you can then see inside the folder and its condense

Ls -la – shows a list of the folders with details

cd- change directory cd does not have a man page but help cd gives you details about it

cd ..-That goes back one folder

Absolute paths starts with a forward slash, all directories start with a root

Mkdir -makes folders, you can make different folders by just spacing their names

To make a folder in another you can just do mkdir (filename) and the filedname again

To make a parent directory use the -p

Mkdir -p test/test1/test2 there you created the test2 folder in the test1 folder

Touch- is to create files, you can create an empty file but you can add an extension to make it a specific file like word,excel or pdf

Rmdir- is to delete a file or folder

Rmdir with the file name to delete it

Rm- use it to delete files too

You can use -v with rm and that will show you wat it did

Rm -r helps you delete directories and what it is in them, so files with things in them can be deleted using this command if you use -ri then it will ask if you are sure about the files and ask you per file

Open- will open a folder or file outside the terminal

Mv- helps you move a file name so if you have the wrong spelling

And the move command will know if we want to move stuff into a folder it will do that with the folder name

Cp -is for copping stuff

Head – shows the beginning of a file (first ten lines by default) if you do -n with a number it gives you those lines

Tail- gives you the last 10 lines and with -n an exact number

Date- prints out the date and time

>(greater sign)- redirecting where it goes

If we run the command again it replaces what is in there

If we use 2 signs >> then it adds it on

If the file doesn’t exist the the file is being made

Eg date > date.txt if the date.txt doesn’t exist then it will be made

Cat -concatenates files cat gives the entire file

You can use cat to print all the contents of a few files and the use the > with a file name you can put them in a new file

Less- lets you read the contens of a file so less with the file name and its almost the same as cat but it shows everything on pages / in less you can use to search

Echo- it basically outputs the same thing you can use this to put text into a without opening the file

Wc- word count it counts the lines,words, bytespyping we are taking the output of one command and passing it as it input of another command | that character

Sort – sorts info by default it is alphabetic but it does not change everything within the file

Uniq- reports or omits deleted lines

Removes ajasent duplicated values

So best is to sort and then do unique

Explore.exe -to open a file

Expansions special characters /shortcuts

Diff- is to find the difference between files

Find -use it tp find files or folders if you are looking for something in your current folder use a dot . you can narrow it down eg find . -name ‘\*7\*’ so we are looking for any file or folder that has the number 7 in it

Grep- so find, finds files or foldeders but grep finds a statement within a file -n will give us the line numbers it can work with regular expressions

Du- disk usage find sizes of files and directories on our system -h will make it human readable

Df- it will let us know how much space things take and their size and what is let to use

We can pass an argument to df as well

History- history shows the history of the commands that have been run, to run the number of that command you can use it like this

Eg !56

Ps-with help us see the currently running processes you can combined it with grep if you are looking for a specific thing

Top- will show the top most intensive things that take the most of the cpu and is the most itense on it

Kill- to end programs

Has a bunch of things conneted to it

Killall- use it with the program you want to kill

Jobs,bg and fg- work together they all show what’s running on the system job is what’s running in total fg is foreground if we pause a job we use fg and it will resume it background and we don’t see it is running then and continue with other stuff

Gzip – compressing files uses Lempel ziv coding to reduce the size of files LZ77

To do it run gzip with the file name and then it will replace it if you run do -k it adds the gzip file

Tar- takes a few files and archives them into one file so it creates the archive and put the files in it

Nano- is a text editor one of many you can also create a new file and go into the editing via nano and the new file name

Alias- helps us to create our own shortcuts

Xargs- take output from one command and creates arguments for a new command

Ln- it is a link to something, in another directory

Hard links- this will point to a file in memory it doesn’t matter if its been deleted or not

Soft links- to do a soft link use ln -s if you change something in the soft link then you change in the original too if you delete the original then the soft link will point to something that isn’t in memory anymore and it wont work

Who- this command shows who is logged in on a machine

Su- switch user this command allows toy to switch the user use it as su with the user name (mostly for admin)

Sudo- super user do helps us run commands

Passwd- helps users change their passwords

Chown- you can change the owner of files using the chown command

Chown <owner> <filename>

Permissions

Details what can happen to a file first we look at the file types

-regular file

D directory

C character special file

l symbolic link

with the permissions you see 3 things

owner group and world now these have specific access to file

chmod to change permissions