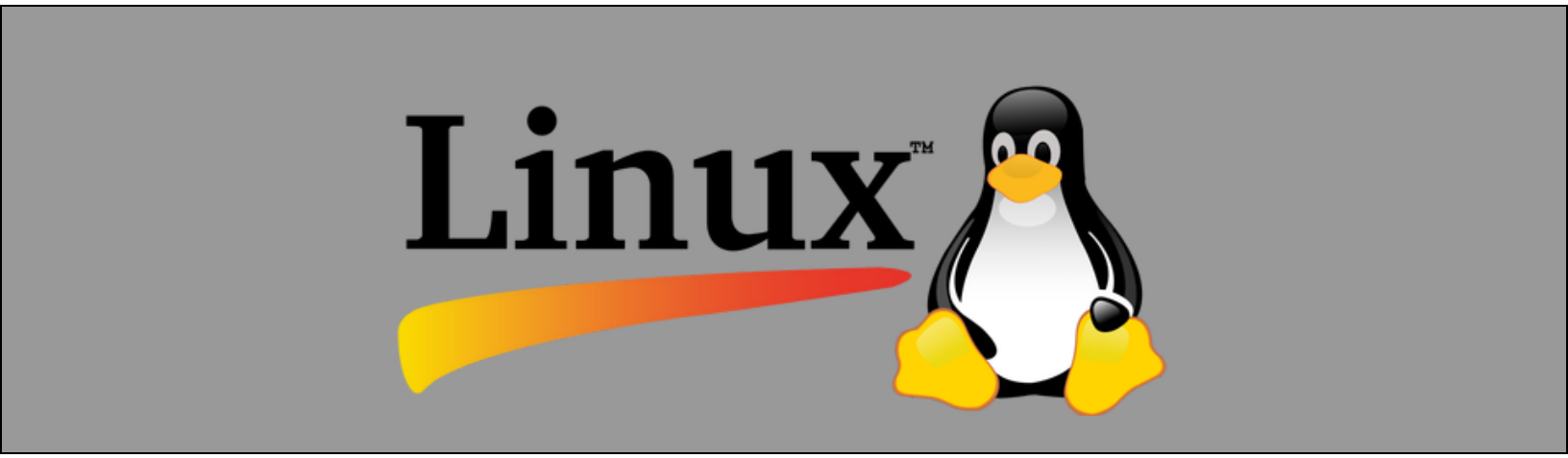
Essential Linux Commands

Prepared By: Aamir Pinger



fb.com/AamirPingerOfficial

github.com/AamirPinger

linkedin.com/in/AamirPinger

LINUX ESSENTIAL COMMANDS

Commands	What it does
ls	List down all the contents of a directory
cd /bin/	Changes directory and goes to bin directory
cd ~	the tilde (~) sign signifies the user's home dir – change dir to home directory
cd ..	Means to change directory one level up
mkdir	A command used to create directories
pwd	Short for present working directory. This command will display the directory where you are currently in
cat <filename>	Command to print all the contents of provided filename on the screen
cp /home/ /tmp/	Copy contents of /home/ to /tmp
mv /directoryName/file1.txt /newDirectoryName/	Move the file file1.txt to the /newDirectoryName/ directory. You can also use this command to move the entire directory to another Directory
rm file1.txt	Delete the file file1.txt. Take extra precaution in using the rm command, especially when you are logged in as root
find / -name "linux*"	The find command is a powerful tool that you can use when searching using the command line. The command here will search for any file or directory with a name that starts with linux
uname -a	This command displays information about the machine, the processor architecture, and the operating system details.

lscpu	This command returns more information about the system such as the number of CPUs and the CPU speed
cat /proc/cpuinfo	This is a file that contains more information than the one displayed using the lscpu command
df -h	This command displays the disk space usage in all of the mounted devices. The -h option presents the results in a human readable output, using G for gigabytes or M for megabytes sizes
du ~/Downloads	This command displays all the files inside the specified directory and their corresponding file sizes. You can also specify a filename
du ~/Downloads -sh	The –s option provides the total file size of the specified directory and -h makes it human readable form

Keys to Use	Purpose	Example
info	Shows online information about a command	$ info uname
man	Shows details (manual) of a command	$ man uname
whatis	Shows a short description of a specific keyword	$ whatis uname
type	Shows the location of a command file	$ type uname
alias	Assign a command alias – especially useful for long	$ alias t=type $ t uname

	commands	$ alias
unalias	Remove command alias	$ unalias t
pwd	Displays the current directory	$ pwd
ln	Create links to files and directories	$ *ln -s [file] [soft-link-to-file]* $ *ln -s abc.txt newAbc.txt*
touch	To trigger a file stamp update for a file	$ touch abc.txt
find	Search for a file based on the name	$ *find [dir-path] -name [filename]* $ *find . -name ap.jpeg*
whereis	Search for executable files	$ *whereis uname*
which	Search for files in the directories part of the PATH variable	$ *which uname*

dd	Copy lines of data	$ dd conv=ucase
		Type Hello world **ctrl+d**
		$ echo “hello world > abc.txt
		$ dd if=abc.txt of=newabc.txt conv=ucase
		$ cat newabc.txt

diff	Display the results of comparing two files	$ echo “hello world > abc.txt
		$ echo “hello world > abc1.txt
		$ diff abc.txt abc1.txt -s
		$ echo “hello world123 > newabc.txt
		$ diff abc.txt newabc.txt -s

more	Show a text file one page at a time – display can only go	$ ls -R > abc.txt $ more abc.txt

	forward	$ ls -R | more
less	Show a text file one page at a time – display can only go forward and backwards	$ less abc.txt $ ls -R | less
wc	Display the count of the number of characters, words, and lines in a file	$ wc abc.txt

cut	Get sections of text in a file	$ cut -b 1 abc.txt
		$ cut -b 1-3 abc.txt
		$ cut -b 1,3 abc.txt

grep	Display results of finding expressions in a file	$ cat abc.txt | grep Desktop
		$ cat abc.txt | grep -i desktop
		$ grep -i "desktop" abc.txt

sed	Perform editing commands, then copy to a standard output	First occurance in every line will be changed
		$ sed 's/Desktop/Dashboard/' abc.txt
		2nd occurance in every line will be changed
		$ sed 's/Desktop/Dashboard/2' abc.txt
		All occurances will be changed
		$ sed 's/Desktop/Dashboard/g' abc.txt

split	Specify a size to break a file into	$ split abc.txt
		$ ls
		$ rm x*
		-l100 is 100 lines per file
		$ split -l100 abc.txt
		$ ls

sort	Arrange the lines in a file	$ sort abc.txt
uniq	Keep unique lines in a file and delete duplicates	$ echo “Karachi Karachi

		Lahore
		Islamabad
		Islamabad
		Lahore" > abc.txt
		$ cat abc.txt
		$ uniq abc.txt
		$ uniq abc.txt -c
		$ uniq abc.txt -d

tar	Archive files with one or more directories	Archive the file
		$ tar -cf archive.tar file1 file2
		Extract the files
		$ tar -xf archive.tar

cal	Show the calendar for the specified month or year	$ cal
		$ cal -3
		$ cal -m 5
		$ cal -y 2020

date	Show/Set the current date and time	$ date
		Sets the system date and time to given date
		$ date -s "11/20/2003 12:48:00"

bg	Run a program or a process in the background	$ bg %[PID]
free	Check for the free memory	$ free
kill	Stop a process	$ kill <PSID>
nice	Run a program with a low priority, niceness values range from -20 to 19, with the former being most favorable, while latter being least	$ nice -10 ls -R $ nice --10 ls -R
ps	Show current running	$ ps

	processes	
top	Show list of CPU and memory utilization of processes	$ top
reboot	Restart the computer	$ reboot
shutdown	Turn off computer	$ shutdown

Adding user from CLI need few steps/commands at CLI

First, login as root by using the command su

aamir@ap-linux:~$ su
Password:
root@ap-linux:/home/a

- Add user by using following command syntax

root@ap-linux:/home/aamir# /usr/sbin/useradd -c "Test User" test

- Once done with above command type **passwd**

root@ap-linux:/home/aamir# passwd
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ap-linux:/home/aamir#

- To modify an account, use the **usermod** command
- To delete the user account, use the **/usr/sbin/userdel <username>** command
- To add a user group, you need to use the command **groupadd <groupname>**
- For example, let's create a group named office. To create this group,

root@ap-linux:/home/aamir# groupadd office

- To add test user which we create recently to above created office group

root@ap-linux:/home/aamir# usermod -G office test

- To delete the group, use the command groupdel office
- A user and group account owns a Linux file or directory. To see the owner of a particular file

aamir@ap-linux:~$ ls -l <filename>

- To change the ownership of any file from one user to another user

aamir@ap-linux:~$ chown <newuser> <filename>

- To change the group owner of the file

aamir@ap-linux:~$ chgrp <newgroup> <filename>